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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Muralidhara Padigaru, et al.		
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FOR:	NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME		

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Assistant Commissioner for Patents
Washington, D.C. 20231

STATEMENT IN SUPPORT OF COMPUTER READABLE FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. The sequence listing is supported by the specification and references incorporated therein. Therefore, no new matter is added at this time.

Respectfully submitted,

Dated: July 26, 2002

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#3

SEQUENCE LISTING

<110> Padigaru, Muralidhara
Kekuda, Ramesh
Colman, Steven
Spytek, Kimberly
Ballinger, Robert
Vernet, Corine
Li, Li
Shenoy, Suresh
Casman, Stacie
Guzev, Vladimir

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Thr Thr Phe Tyr Val Ile Asn Val Thr Gly Asn Leu Gly Met Ile Val
35 40 45

Leu Ile Arg Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ser His Leu Ser Phe Val Asp Thr Cys Phe Ser Ser Val Val Ser Pro
65 70 75 80

Lys Met Leu Thr Asp Phe Phe Val Lys Arg Lys Ala Ile Ser Phe Leu
85 90 95

Gly Cys Ala Leu Gln Gln Trp Phe Phe Gly Phe Phe Val Ala Ala Asp
100 105 110

Cys Phe Leu Leu Glu Ser Met Ala Tyr Asp Cys Tyr Val Ala Ile Cys
115 120 125

Asn Pro Leu Leu Tyr Ser Val Ala Met Ser Gln Arg Leu Cys Ile Gln
130 135 140

Leu Val Val Gly Pro Tyr Val Ile Gly Leu Met Asn Thr Met Thr His
145 150 155 160

Thr Thr Asn Ala Phe Cys Leu Pro Phe Cys Gly Pro Asn Val Ile Asn
165 170 175

Pro Phe Phe Cys Asp Met Ser Pro Leu Leu Ser Leu Val Cys Ala Asp
180 185 190

Thr Arg Leu Asn Lys Leu Ala Val Phe Ile Val Ala Gly Ala Val Gly
195 200 205

Val Phe Ser Gly Leu Thr Ile Leu Ile Ser Tyr Ile Tyr Ile Leu Met
210 215 220

Ala Ile Leu Arg Ile Arg Ser Ala Asp Gly Arg Cys Lys Thr Phe Ser
225 230 235 240

Thr Cys Ser Ser His Leu Thr Ala Val Phe Ile Ser Tyr Gly Thr Leu
245 250 255

Phe Phe Ile Tyr Val His Pro Ser Ala Thr Phe Ser Leu Asp Leu Asn
260 265 270

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Tyr Ile Ile Thr Val Val Gly Asn Ile Gly Met Met Leu Leu Ile Lys
         35                  40                  45
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65 70 75 80

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85 90 95

Ala Gln Cys Phe Phe Phe Ile Ala Leu Val His Val Glu Ile Phe Ile
100 105 110

Leu Ala Ala Ile Ala Phe Asp Arg Tyr Thr Val Ile Gly Asn Pro Leu
115 120 125

Leu Tyr Gly Ser Lys Met Ser Arg Asp Val Cys Ile Arg Leu Ile Thr
130 135 140

Phe Pro Tyr Ile Tyr Gly Phe Leu Thr Ser Leu Thr Ala Thr Leu Trp
145 150 155 160

Thr Tyr Gly Leu Tyr Phe Cys Gly Lys Ile Glu Ile Asn His Phe Tyr
165 170 175

Cys Ala Asp Pro Pro Leu Ile Lys Met Ala Cys Ala Gly Thr Phe Val
180 185 190

Lys Glu Tyr Thr Met Leu Ile Leu Ala Gly Ile Asn Phe Thr Tyr Ser
195 200 205

Leu Thr Val Ile Ile Ile Ser Tyr Leu Phe Ile Leu Ile Ala Ile Leu
210 215 220

Arg Met Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Thr Ala Val Ile Ile Phe Tyr Gly Thr Leu Ile Phe Met
245 250 255

Tyr Leu Arg Arg Pro Thr Glu Glu Ser Val Glu Gln Gly Lys Met Val
260 265 270

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Gly Cys Gly Ile Gln Ile Gly Phe Phe Val Ser Leu Val Gly Ser Glu
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Ile Thr Gly Ser Ser Trp Ala Phe Gly Ile Ile Asp Gly Val Ile Gln
145 150 155 160

Met Val Ala Ala Met Gly Leu Pro Tyr Cys Gly Ser Arg Ser Val Asp
165 170 175

His Phe Phe Cys Glu Val Gln Ala Leu Leu Lys Leu Ala Cys Ala Asp
180 185 190

Thr Ser Leu Phe Asp Thr Leu Leu Phe Ala Cys Cys Val Phe Met Leu
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35 40 45

Ala Asn His Arg Leu Gln Thr Pro Met Tyr Phe Phe Leu Ser Asn Trp
50 55 60

Ser Ile Trp Asp Ile Phe Phe Thr Thr Ser Val Ile Pro Lys Leu Leu
65 70 75 80

Ala Cys Leu Leu Gln Asp Lys Lys Thr Ile Ser Leu Leu Gly Ala Ser
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Pro Lys Leu Ile Ser Leu Val Phe Trp Gly Thr Val Glu Phe Ile Leu
100 105 110

Trp Ala Val Met Ser Phe Asp Cys Tyr Val Ala Ile Cys Asp Pro Leu

115 120 125

His Tyr Thr Ile Ile Met Asn Ser Arg Ala Cys Leu Leu Leu Val Leu
130 135 140

Gly Cys Trp Val Gly Ala Phe Leu Ser Val Leu Cys Pro Thr Ile Val
145 150 155 160

Val Ser Arg Leu Pro Phe Cys Tyr Lys Glu Ile Ser His Phe Phe Cys
165 170 175

Asp Ile Thr Pro Leu Leu His Val Ser Cys Ile Asp Thr His Phe Ile
180 185 190

Glu Met Ile Asn Phe Leu Leu Ser Ser Leu Ile Leu Leu Thr Ser Leu
195 200 205

Val Leu Thr Thr Val Ser Tyr Ile Tyr Ile Ile Ser Thr Ile Leu His
210 215 220

Ile Pro Ser Ala Gln Gly Arg Arg Lys Ala Phe Ser Thr Cys Ala Ser
225 230 235 240

His Ile Thr Val Ile Ser Ile Ala Tyr Ile Ser Asn Ile Phe Arg Tyr
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Val Arg Pro Ser Gln Ser His Ser Met Gly Phe Asp Lys Val Thr Ala
260 265 270

Val Pro Thr Met Val Thr Pro Leu Leu Asn Pro Phe Thr Tyr Ser Leu
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Arg Asn Glu Lys Val Lys Ala Val Leu Lys Glu Ala Val Ser Lys Ile
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Met Ser Ser Trp His Arg Arg Thr
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Pro Leu Ser Leu Leu Phe Leu Leu Ala Met Gly Ala Asn Thr Thr Leu
35 40 45

Leu Ile Thr Ile Gln Leu Glu Ala Ser Leu His Gln Pro Leu Tyr Tyr
50 55 60

Leu Leu Ser Leu Leu Ser Leu Leu Asp Ile Val Leu Cys Leu Thr Val
65 70 75 80

Ile Pro Lys Val Leu Ala Ile Phe Trp Phe Asp Leu Arg Ser Ile Ser
85 90 95

Phe Pro Ala Cys Phe Leu Gln Met Phe Ile Met Asn Ser Phe Leu Thr
100 105 110

Met Glu Ser Cys Thr Phe Met Val Met Ala Tyr Asp Arg Tyr Val Ala
115 120 125

Ile Cys His Pro Leu Arg Tyr Pro Ser Ile Ile Thr Asp Gln Phe Val
130 135 140

Ala Arg Ala Val Val Phe Val Ile Ala Arg Asn Ala Phe Val Ser Leu
145 150 155 160

Pro Val Pro Met Leu Ser Ala Arg Leu Arg Tyr Cys Ala Gly Asn Ile
165 170 175

Ile Lys Asn Cys Ile Cys Ser Asn Leu Ser Val Ser Lys Leu Ser Cys
180 185 190

Asp Asp Ile Thr Phe Asn Gln Leu Tyr Gln Phe Val Ala Gly Trp Thr
195 200 205

Leu Leu Gly Ser Asp Leu Ile Leu Ile Val Ile Ser Tyr Ser Phe Ile
210 215 220

Leu Lys Val Val Leu Arg Ile Lys Ala Glu Gly Ala Val Ala Lys Ala
225 230 235 240

Leu Ser Thr Cys Gly Ser His Phe Ile Leu Ile Leu Phe Phe Ser Thr
245 250 255

Val Leu Leu Val Leu Val Ile Thr Asn Leu Ala Arg Lys Arg Ile Pro
260 265 270

Pro Asp Val Pro Ile Leu Leu Asn Ile Leu His His Leu Ile Pro Pro
275 280 285

Ala Leu Asn Pro Ile Val Tyr Gly Val Arg Thr Lys Glu Ile Lys Gln
290 295 300

Gly Ile Gln Asn Leu Leu Lys Arg Leu
305 310

<210> 13
<211> 998
<212> DNA
<213> Homo sapiens

<400> 13
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tacacttttg gctggctttc ccactgtgtt ttatgtatgc cttggccacc ctgggtaacc 180
tgaccattgt cctcatcatt cgtgtggaga ggcgactgca tgagcccatg tacctcttcc 240
tggccatgct ttccactatt gacctagtcc tctcctctat caccatgccc aagatggcca 300
gtcttttcct gatgggcatc caggagatcg agttcaacat ttgcctggcc cagatgttcc 360
ttatccatgc tctgtcagcc gtggagtcag ctgtcctgct ggccatggct tttgaccgct 420
ttgtggccat ttgccaccca ttgcgccatg cttctgtgct gacagggtgt actgtggcca 480
agattggact atctgccctg accaggggggt ttgtattctt cttcccactg cccttcatcc 540
tcaagtggtt gtcctactgc caaacacata ctgtcacaca ctccttctgt ctgcaccaag 600
atattatgaa gctgtcctgt actgacacca gggtcaatgt ggtttatgga ctcttcatca 660
tcctctcagt catgggtgtg gactctctct tcattggctt ctcatatatc ctcatcctgt 720
gggctgtttt ggagctgtcc tctcggaggg cagcactcaa ggctttcaac acctgcatct 780
cccacctctg tgctgttctg gtcttctatg tacccctcat tgggctctcg gtggtgcata 840
ggctgggtgg tcccacctcc ctcctccatg tggttatggc taatacctac ttgctgctac 900
cacctgtagt caacccccctt gtctatggag ccaagaccaa agagatctgt tcaagggtcc 960
tctgtatgtt ctcacaaggt ggcaagtgag acacctta 998

<210> 14
<211> 324
<212> PRT
<213> Homo sapiens

<400> 14
Met Gln Lys Pro Gln Leu Leu Val Pro Ile Ile Ala Thr Ser Asn Gly
1 5 10 15

Asn Leu Val His Ala Ala Tyr Phe Leu Leu Val Gly Ile Pro Gly Leu
20 25 30

Gly Pro Thr Ile His Phe Trp Leu Ala Phe Pro Leu Cys Phe Met Tyr
35 40 45

Ala Leu Ala Thr Leu Gly Asn Leu Thr Ile Val Leu Ile Ile Arg Val
50 55 60

Glu Arg Arg Leu His Glu Pro Met Tyr Leu Phe Leu Ala Met Leu Ser
65 70 75 80

Thr Ile Asp Leu Val Leu Ser Ser Ile Thr Met Pro Lys Met Ala Ser
85 90 95

Leu Phe Leu Met Gly Ile Gln Glu Ile Glu Phe Asn Ile Cys Leu Ala
100 105 110

Gln Met Phe Leu Ile His Ala Leu Ser Ala Val Glu Ser Ala Val Leu
115 120 125

Leu Ala Met Ala Phe Asp Arg Phe Val Ala Ile Cys His Pro Leu Arg

130 135 140

His Ala Ser Val Leu Thr Gly Cys Thr Val Ala Lys Ile Gly Leu Ser
145 150 155 160

Ala Leu Thr Arg Gly Phe Val Phe Phe Phe Pro Leu Pro Phe Ile Leu
165 170 175

Lys Trp Leu Ser Tyr Cys Gln Thr His Thr Val Thr His Ser Phe Cys
180 185 190

Leu His Gln Asp Ile Met Lys Leu Ser Cys Thr Asp Thr Arg Val Asn
195 200 205

Val Val Tyr Gly Leu Phe Ile Ile Leu Ser Val Met Gly Val Asp Ser
210 215 220

Leu Phe Ile Gly Phe Ser Tyr Ile Leu Ile Leu Trp Ala Val Leu Glu
225 230 235 240

Leu Ser Ser Arg Arg Ala Ala Leu Lys Ala Phe Asn Thr Cys Ile Ser
245 250 255

His Leu Cys Ala Val Leu Val Phe Tyr Val Pro Leu Ile Gly Leu Ser
260 265 270

Val Val His Arg Leu Gly Gly Pro Thr Ser Leu Leu His Val Val Met
275 280 285

Ala Asn Thr Tyr Leu Leu Leu Pro Pro Val Val Asn Pro Leu Val Tyr
290 295 300

Gly Ala Lys Thr Lys Glu Ile Cys Ser Arg Val Leu Cys Met Phe Ser
305 310 315 320

Gln Gly Gly Lys

<210> 15
<211> 952
<212> DNA
<213> Homo sapiens

<400> 15
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agcactggcg attctcctct gtggactctt ctctgtcttc tatacactca ccctgctggg 120
gaatggggtc atctttggga ttatctgcct ggactctaag cttcacacac ccatgtactt 180

cttcctctca cacctggcca tcattgacat gtcctatgct tccaacaatg ttcccaagat 240
gttggcaaac ctaatgaacc agaaaagcac catctccttt gttccatgca taatgcagac 300
ttttttgtat ttggcttttg ctgttacaga gtgcctgatt ttggtggtga tgtcctatga 360
taggtatgtg gccatctgcc acccttttcca gtacactgtc atcatgagct ggagagtgtg 420
cacgatcctg gcctcaacat gctggataat tagctttctc atggctctgg tccatataac 480
tcatattctg aggccgcctt tttgtggccc acaaaagatc aaccacttta tctgtcaaat 540
catgtccgta ttcaaattgg cctgtgctgg ccctaggctc aaccaggtgg tcctatatgc 600
gggttctgcg ttcatcgtag aggggccgct ctgcctggag ctggtctcca acttgcacat 660
cctgtcgcgc catcttgagg atccagtaat ggggagggcc gcagaccgac ttactcttcc 720
tgctccttcc caccttttgca tggtgggact ccttttttggc agcaccatgg tcatgtacat 780
ggcccccaag tcccgccacc ctgaggagca gcagaaggtc ctttccctgt tttacagcct 840
tttcaacccg atgctgaacc ccttgatcta cagcctgagg aacgcagagg tcaagggtgc 900
cctgaaaaga gtgttgtgga aacagagatc aaagtgaggg atgccaggga aa 952

<210> 16
<211> 311
<212> PRT
<213> Homo sapiens

<400> 16
Met Gly Gly Lys Gln Pro Trp Val Thr Glu Phe Ile Leu Val Gly Phe
1 5 10 15

Gln Val Gly Pro Ala Leu Ala Ile Leu Leu Cys Gly Leu Phe Ser Val
20 25 30

Phe Tyr Thr Leu Thr Leu Leu Gly Asn Gly Val Ile Phe Gly Ile Ile
35 40 45

Cys Leu Asp Ser Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
50 55 60

Leu Ala Ile Ile Asp Met Ser Tyr Ala Ser Asn Asn Val Pro Lys Met
65 70 75 80

Leu Ala Asn Leu Met Asn Gln Lys Ser Thr Ile Ser Phe Val Pro Cys
85 90 95

Ile Met Gln Thr Phe Leu Tyr Leu Ala Phe Ala Val Thr Glu Cys Leu
100 105 110

Ile Leu Val Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
115 120 125

Phe Gln Tyr Thr Val Ile Met Ser Trp Arg Val Cys Thr Ile Leu Ala
130 135 140

Ser Thr Cys Trp Ile Ile Ser Phe Leu Met Ala Leu Val His Ile Thr
145 150 155 160

His Ile Leu Arg Pro Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe
165 170 175

Ile Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Gly Pro Arg
180 185 190

Leu Asn Gln Val Val Leu Tyr Ala Gly Ser Ala Phe Ile Val Glu Gly
195 200 205

Pro Leu Cys Leu Glu Leu Val Ser Asn Leu His Ile Leu Ser Arg His
210 215 220

Leu Glu Asp Pro Val Met Gly Arg Ala Ala Asp Arg Leu Thr Leu Pro
225 230 235 240

Ala Pro Ser His Leu Cys Met Val Gly Leu Leu Phe Gly Ser Thr Met
245 250 255

Val Met Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys
260 265 270

Val Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val
290 295 300

Leu Trp Lys Gln Arg Ser Lys
305 310

<210> 17
<211> 991
<212> DNA
<213> Homo sapiens

<400> 17
gatgaaaggg gcaaacctga gccaagggat ggagtttgag ctcttgggcc tcaccactga 60
cccccagctc cagaggctgc tcttcgtggt gttcctgggc atgtacacag ccactctgct 120
ggggaacctg gtcatgttcc tcctgatcca tgtgagtgcc accctgcaca cacccatgta 180
ctccctcctg aagagcctct ccttcttgga tttctgctac tcctccacgg ttgtgcccca 240
gaccctggtg aacttcttgg ccaagaggaa agtgatctct tattttggct gcatgactca 300
gatgttcttc tatgcgggtt ttgccaccag tgagtgctat ctcatcgctg ccatggccta 360
tgaccgctat gccgctattt gtaacccccc gctctactca accatcatgt ctcctgaggt 420
ctgtgcctcg ctgattgtgg gctcctacag tgcaggattc ctcaattctc ttatccacac 480

Ala Val Leu Cys Ile Ser Ser Pro Phe Leu Leu Ile Ile Tyr Ser Tyr
210 215 220

Val Arg Ile Leu Val Ala Val Leu Leu Met Pro Ser Pro Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Met
245 250 255

Phe Tyr Gly Ser Ala Ser Ile Thr Tyr Leu Arg Pro Lys Ser Ser His
260 265 270

Ser Pro Gly Met Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
290 295 300

Ala Ala Leu Arg Lys Thr Leu Ser Leu Lys Lys Pro Leu Ala Ile Asn
305 310 315 320

Arg

<210> 49
<211> 983
<212> DNA
<213> Homo sapiens

<400> 49
gagatgagta tcaactgctc tctgtggcag gagaacagct tgtctgtcaa acgctttgca 60
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atgttcttag tatcactgac aggaaattca ctcatagccc ttgccatctg caccagtcca 180
gccctacata ccccaatgta cttctttctg gccaatttgt ctctcctgga gatcggctac 240
acttgctctg tcatacccaa gatgttacag agccttgtaa gtgaggcccg agggatctca 300
cgggaagggt gtgccacaca gatgtttttc tttatattct ttggtataac tgagtgctgt 360
ctattggcag ccatggcttt tgaccgctac atggccatat gctccccact ccactatgca 420
acacgaatga gtcgtggggt atgtgcccat ttggccatag tttcatgggg aatgggatgt 480
atagtagggt tgggacagac caattttatt ttctcgttga acttctgtgg accctgtgag 540
atagaccact tcttctgtga ccttccacct gtcctggcac ttgcctgtgg agatacatcc 600
caaaatgagg ctgcaatttt tgtggcggca gtcctctgca tatttagtcc atttttgctg 660
attatttctt cctatgtcag aattctgatt gcagtgctgg taatgccctc acgtgagggg 720
cgccataaag ctctctccac ctgttcttcc catctacttg tagtcacact cttctatggc 780
tcaacgtctg ccacctattt gaggcccaaa tctgatcact caccagaagt ggataaactc 840
ttggcccttt tctacacagc ggtgacatcc atgctgaacc ccatcatcta tagcttaagg 900
aacaaggaag tgaaggcagc actgagaaaa acactgagtc tgaagaaagt tctgataatg 960
aataggtaac tgaggatcct gaa 983

<210> 50
<211> 321
<212> PRT
<213> Homo sapiens

<400> 50
Met Ser Ile Asn Cys Ser Leu Trp Gln Glu Asn Ser Leu Ser Val Lys
1 5 10 15

Arg Phe Ala Phe Ala Lys Phe Ser Glu Val Pro Gly Glu Cys Phe Leu
20 25 30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
35 40 45

Ser Leu Ile Ala Leu Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
50 55 60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65 70 75 80

Cys Ser Val Ile Pro Lys Met Leu Gln Ser Leu Val Ser Glu Ala Arg
85 90 95

Gly Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Ile Phe
100 105 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Phe Asp Arg
115 120 125

Tyr Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser Arg
130 135 140

Gly Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145 150 155 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
165 170 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
180 185 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Ala
195 200 205

Ala Val Leu Cys Ile Phe Ser Pro Phe Leu Leu Ile Ile Ser Ser Tyr

tggctgtatc tttagtctga aattctgcgg tgctcatgtc gtcactcact tcttctgtga 540
tgggccaccc atcctgtcct tgtcttgtgt agacacctca ctgtgtgaga tcctgctctt 600
cattttgct ggtttcaacc ttttgagctg caccctcacc atcttgatct cctacttctt 660
aattctcaac accatcctga aaatgagctc ggcccagggc aggtttaagg cattttccac 720
ctgtgcatcc cacctcactg ccatctgcct cttctttggc acaacacttt ttatgtacct 780
gcgccccagg tccagctact ccttgaccca ggaccgcaca gttgctgtca tctacacagt 840
ggtgatccca gtgctgaacc ccctcatgta ctctttgaga aacaaggatg tgaagaaagc 900
tttaataaag gtttggggta ggaaaacaat ggaatgattt ctcaatgcat taccacatat 960
ctttagaaag tcaagggaac ttttacctta g 991

<210> 18
<211> 311
<212> PRT
<213> Homo sapiens

<400> 18
Met Lys Gly Ala Asn Leu Ser Gln Gly Met Glu Phe Glu Leu Leu Gly
1 5 10 15

Leu Thr Thr Asp Pro Gln Leu Gln Arg Leu Leu Phe Val Val Phe Leu
20 25 30

Gly Met Tyr Thr Ala Thr Leu Leu Gly Asn Leu Val Met Phe Leu Leu
35 40 45

Ile His Val Ser Ala Thr Leu His Thr Pro Met Tyr Ser Leu Leu Lys
50 55 60

Ser Leu Ser Phe Leu Asp Phe Cys Tyr Ser Ser Thr Val Val Pro Gln
65 70 75 80

Thr Leu Val Asn Phe Leu Ala Lys Arg Lys Val Ile Ser Tyr Phe Gly
85 90 95

Cys Met Thr Gln Met Phe Phe Tyr Ala Gly Phe Ala Thr Ser Glu Cys
100 105 110

Tyr Leu Ile Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Ser Thr Ile Met Ser Pro Glu Val Cys Ala Ser Leu
130 135 140

Ile Val Gly Ser Tyr Ser Ala Gly Phe Leu Asn Ser Leu Ile His Thr
145 150 155 160

Gly Cys Ile Phe Ser Leu Lys Phe Cys Gly Ala His Val Val Thr His

165 170 175

Phe Phe Cys Asp Gly Pro Pro Ile Leu Ser Leu Ser Cys Val Asp Thr
180 185 190

Ser Leu Cys Glu Ile Leu Leu Phe Ile Phe Ala Gly Phe Asn Leu Leu
195 200 205

Ser Cys Thr Leu Thr Ile Leu Ile Ser Tyr Phe Leu Ile Leu Asn Thr
210 215 220

Ile Leu Lys Met Ser Ser Ala Gln Gly Arg Phe Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Thr Ala Ile Cys Leu Phe Phe Gly Thr Thr Leu
245 250 255

Phe Met Tyr Leu Arg Pro Arg Ser Ser Tyr Ser Leu Thr Gln Asp Arg
260 265 270

Thr Val Ala Val Ile Tyr Thr Val Val Ile Pro Val Leu Asn Pro Leu
275 280 285

Met Tyr Ser Leu Arg Asn Lys Asp Val Lys Lys Ala Leu Ile Lys Val
290 295 300

Trp Gly Arg Lys Thr Met Glu
305 310

<210> 19
<211> 967
<212> DNA
<213> Homo sapiens

<400> 19
aaatgtccag aagaaactat actgaactga cagaatttgt tctcttgggt ctaacaagcc 60
gtccagagct gcgagttgct ttcttggcac tgttcctttt tgtctacata gccactgtgg 120
taggaaactt ggggatgatt attttaatca aagttgattc tcgacttcac actcccatgt 180
tatttttttct ctccagtttg tccattctag atctgtgttt ctccacaaat ttcactccca 240
aaatgctaga aaatttctta tcagagaaga agaccatttc ctatgcaggt tgtttgatgc 300
agtgctatgt tgtcattgct gtggtccttg cagagcactg catgttggca gtcatggcat 360
atgaccgcta tatggccatc tgtaatccat tgctctacag tagcaaaatg tcccaaggtg 420
tttgtgtcca cctggtcatt gtcccttatg tctatggctt tcttctcagt gtgatggaaa 480
ccttaaggac ctacaacctc tccttctgtg gaacaaatga aatcaaccat ttctactgtg 540
ctgatcctcc tcttatcaaa ctggcatgct ctgacacgta cagcaaggag ctgtccatgt 600
acatagtagc cggctacagc aacgtccagt ctcttctgat cattctcaca tcctacatgt 660
tcatccttgt cgctatcctc agaagccatt ctgcagaggg aaggaaaaaa gctttttcca 720

catgtggttc ccacctgaca gttgtcacaa tcttctatgg aaccctcttc tgcatgcatt 780
tgagacgtcc cacagacgag tccgtggagc aggggaaaat ggtggctgtg ttttacacca 840
cagtgatact catgctgaac tccatgatct atggcctcag gaacaaggat gtgaaagagg 900
cgttgaaaaa agcaatagga aaacaaacat tgggaaaata aaaatgctaa gctatcatta 960
aaaattt 967

<210> 20
<211> 312
<212> PRT
<213> Homo sapiens

<400> 20
Met Ser Arg Arg Asn Tyr Thr Glu Leu Thr Glu Phe Val Leu Leu Gly
1 5 10 15

Leu Thr Ser Arg Pro Glu Leu Arg Val Ala Phe Leu Ala Leu Phe Leu
20 25 30

Phe Val Tyr Ile Ala Thr Val Val Gly Asn Leu Gly Met Ile Ile Leu
35 40 45

Ile Lys Val Asp Ser Arg Leu His Thr Pro Met Leu Phe Phe Leu Ser
50 55 60

Ser Leu Ser Ile Leu Asp Leu Cys Phe Ser Thr Asn Phe Thr Pro Lys
65 70 75 80

Met Leu Glu Asn Phe Leu Ser Glu Lys Lys Thr Ile Ser Tyr Ala Gly
85 90 95

Cys Leu Met Gln Cys Tyr Val Val Ile Ala Val Val Leu Ala Glu His
100 105 110

Cys Met Leu Ala Val Met Ala Tyr Asp Arg Tyr Met Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Ser Ser Lys Met Ser Gln Gly Val Cys Val His Leu
130 135 140

Val Ile Val Pro Tyr Val Tyr Gly Phe Leu Leu Ser Val Met Glu Thr
145 150 155 160

Leu Arg Thr Tyr Asn Leu Ser Phe Cys Gly Thr Asn Glu Ile Asn His
165 170 175

Phe Tyr Cys Ala Asp Pro Pro Leu Ile Lys Leu Ala Cys Ser Asp Thr
180 185 190

Tyr Ser Lys Glu Leu Ser Met Tyr Ile Val Ala Gly Tyr Ser Asn Val
195 200 205

Gln Ser Leu Leu Ile Ile Leu Thr Ser Tyr Met Phe Ile Leu Val Ala
210 215 220

Ile Leu Arg Ser His Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Thr Val Val Thr Ile Phe Tyr Gly Thr Leu Phe
245 250 255

Cys Met His Leu Arg Arg Pro Thr Asp Glu Ser Val Glu Gln Gly Lys
260 265 270

Met Val Ala Val Phe Tyr Thr Thr Val Ile Leu Met Leu Asn Ser Met
275 280 285

Ile Tyr Gly Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Ala
290 295 300

Ile Gly Lys Gln Thr Leu Gly Lys
305 310

<210> 21
<211> 952
<212> DNA
<213> Homo sapiens

<400> 21
atgttgtccc caaaccacac catagtgaca gaattcattc tcttaggact gacagacgac 60
ccagtgctag agaagatcct gtttggggtg ttcctggcga tctacctaat cacactggca 120
ggcaacctgt gcatgatcct gctgatcagg accaattccc aactgcaaac acccatgtat 180
ttcttccttg gtcacctctc ctttgtagac atttgctatt cttccaatgt tactccaaat 240
atgctgcaca atttcctctc agaacagaag accatctcct acgctggatg cttcacacag 300
tgtcttctct tcatcgccct agtgatcact gagttttact tccttgcttc aatggcattg 360
gatcgctatg tagccatttg cagcccttta cattacagtt ccaggatgtc caagaacatt 420
tgcatctctc tggtcactgt gccttacatg tatggcttcc ttaatgggct ctctcagaca 480
ctgctgacct ttcacttatc cttctgtggc tcccttgaaa tcaatcattt ctactgcgct 540
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tgtgcttccc acctgacaat agtcactttg ttttatggaa ccctcttctg catgtacgta 780
aggcctccat cagagaagtc tgtagaggag tccaaaataa ttgcagtctt ttatactttt 840
ttgagcccaa tgctgaaccc attgatctat agcctacgga acagagatgt aatccttgcc 900
atacaacaaa tgattagggg aaaatccttt tgtaaaattg cagtttaggc ct 952

<210> 22
<211> 315
<212> PRT
<213> Homo sapiens

<400> 22
Met Leu Ser Pro Asn His Thr Ile Val Thr Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Thr Asp Asp Pro Val Leu Glu Lys Ile Leu Phe Gly Val Phe Leu
20 25 30

Ala Ile Tyr Leu Ile Thr Leu Ala Gly Asn Leu Cys Met Ile Leu Leu
35 40 45

Ile Arg Thr Asn Ser Gln Leu Gln Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

His Leu Ser Phe Val Asp Ile Cys Tyr Ser Ser Asn Val Thr Pro Asn
65 70 75 80

Met Leu His Asn Phe Leu Ser Glu Gln Lys Thr Ile Ser Tyr Ala Gly
85 90 95

Cys Phe Thr Gln Cys Leu Leu Phe Ile Ala Leu Val Ile Thr Glu Phe
100 105 110

Tyr Phe Leu Ala Ser Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Ser
115 120 125

Pro Leu His Tyr Ser Ser Arg Met Ser Lys Asn Ile Cys Ile Ser Leu
130 135 140

Val Thr Val Pro Tyr Met Tyr Gly Phe Leu Asn Gly Leu Ser Gln Thr
145 150 155 160

Leu Leu Thr Phe His Leu Ser Phe Cys Gly Ser Leu Glu Ile Asn His
165 170 175

Phe Tyr Cys Ala Asp Pro Pro Leu Ile Met Leu Ala Cys Ser Asp Thr
180 185 190

Arg Val Lys Lys Met Ala Met Phe Val Val Ala Gly Phe Thr Leu Ser
195 200 205

Ser Ser Leu Phe Ile Ile Leu Leu Ser Tyr Leu Phe Ile Phe Ala Ala

210 215 220

Ile Phe Arg Ile Arg Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Thr Ile Val Thr Leu Phe Tyr Gly Thr Leu Phe
245 250 255

Cys Met Tyr Val Arg Pro Pro Ser Glu Lys Ser Val Glu Glu Ser Lys
260 265 270

Ile Ile Ala Val Phe Tyr Thr Phe Leu Ser Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Val Ile Leu Ala Ile Gln Gln Met
290 295 300

Ile Arg Gly Lys Ser Phe Cys Lys Ile Ala Val
305 310 315

<210> 23
<211> 943
<212> DNA
<213> Homo sapiens

<400> 23
gcacatgaaa atcttcaaca gccccagcaa ctccagcacc ttcactggct tcatcctcct 60
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cctcctgacc ctcatgggca atggttccat catctgtgct gtgcactggg atcagagact 180
ccacgccccc atgtacatcc tgctcgccaa cttctccttc ttggagatat gttatgtcac 240
ctccacagtc cccagcatgc tggccaactt cctctctgac accaagatca tctcgttctc 300
tggctgcttc ctccagttct acttttttctt ctccttgggc tctacagaat gctttttcct 360
ggcagttatg gcatttgatc gataccttgc catctgtcgg cctctacgct atccaaccat 420
tatgaccaga cgtctctgta ccaatcttgt ggtcaattgc tgggtacttg gtttcatctg 480
gttcttgatt cctatcgtca acatctccca aatgtccttc tgtggatcta ggattattga 540
ccacttccta tgtgacccag ctcctcttct aactctcact tgcaaaaaag gccctgtgat 600
agagcttgtc ttttctgtct taagtcctct gcctgtcttt atgctctttc tcttcattgt 660
ggggtcctat gctctggtcg tgagagctgt gttgagggtc ccttcagcag ctgggagaag 720
aaaggctttc tccacctgtg ggtctcacct ggctgtggtt tcactgttct acggctcagt 780
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tctgttttat tctgttgtta ccccactgct taaccctgtg atatatagtc ttaggaacaa 900
agatatgaga aaagctctga agaaattttg gggaacataa aat 943

<210> 24
<211> 311
<212> PRT

<213> Homo sapiens

<400> 24

```
Met Lys Ile Phe Asn Ser Pro Ser Asn Ser Ser Thr Phe Thr Gly Phe
  1               5                  10                  15

Ile Leu Leu Gly Phe Pro Cys Pro Arg Glu Gly Gln Ile Leu Leu Phe
             20                  25                  30

Val Leu Phe Thr Val Val Tyr Leu Leu Thr Leu Met Gly Asn Gly Ser
         35                  40                  45

Ile Ile Cys Ala Val His Trp Asp Gln Arg Leu His Ala Pro Met Tyr
     50                  55                  60

Ile Leu Leu Ala Asn Phe Ser Phe Leu Glu Ile Cys Tyr Val Thr Ser
 65                  70                  75                  80

Thr Val Pro Ser Met Leu Ala Asn Phe Leu Ser Asp Thr Lys Ile Ile
                 85                  90                  95

Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly
            100                 105                 110

Ser Thr Glu Cys Phe Phe Leu Ala Val Met Ala Phe Asp Arg Tyr Leu
        115                 120                 125

Ala Ile Cys Arg Pro Leu Arg Tyr Pro Thr Ile Met Thr Arg Arg Leu
    130                 135                 140

Cys Thr Asn Leu Val Val Asn Cys Trp Val Leu Gly Phe Ile Trp Phe
145                 150                 155                 160

Leu Ile Pro Ile Val Asn Ile Ser Gln Met Ser Phe Cys Gly Ser Arg
                165                 170                 175

Ile Ile Asp His Phe Leu Cys Asp Pro Ala Pro Leu Leu Thr Leu Thr
            180                 185                 190

Cys Lys Lys Gly Pro Val Ile Glu Leu Val Phe Ser Val Leu Ser Pro
        195                 200                 205

Leu Pro Val Phe Met Leu Phe Leu Phe Ile Val Gly Ser Tyr Ala Leu
    210                 215                 220

Val Val Arg Ala Val Leu Arg Val Pro Ser Ala Ala Gly Arg Arg Lys
225                 230                 235                 240
```

```
Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Ser Leu Phe Tyr
                245                 250                 255

Gly Ser Val Leu Val Met Tyr Gly Ser Pro Pro Ser Lys Asn Glu Ala
            260                 265                 270

Gly Lys Gln Lys Thr Val Thr Leu Phe Tyr Ser Val Val Thr Pro Leu
        275                 280                 285

Leu Asn Pro Val Ile Tyr Ser Leu Arg Asn Lys Asp Met Arg Lys Ala
    290                 295                 300

Leu Lys Lys Phe Trp Gly Thr
305                 310
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<210> 25
<211> 958
<212> DNA
<213> Homo sapiens

<400> 25

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acccatgaac aggtcagcaa cacacatcgt gacagagttt attctcctgg gattccctgg 60
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gctgggaaat ggagccatca tctatgcagt gagatgcaac ccactactac acacccccat 180
gtactttctg ctgggaaatt ttgccttcct tgagatctgg tatgtgtcct ccactattcc 240
taacatgcta gtcaacattc tctccaagac caaggccatc tcattttctg ggtgcttcct 300
ccagttctat ttcttctttt cactgggaac aactgaatgt ctctttctgg cagtaatggc 360
ttatgatcga tacctggcca tctgccaccc actgcagtac cctgccatca tgactgtaag 420
gttctgtggt aagctggtgt ctttctgttg gcttattgga ttccttggat acccaattcc 480
cattttctac atctcccaac tccccttctg tggtcctaat atcattgatc acttcctgtg 540
tgacatggac ccattgatgg ctctatcctg tgccccagct cccataactg aatgtatttt 600
ctatactcag agctcccttg tcctcttttt cactagtatg tacattcttc gatcctatat 660
cctgttacta acagctgttt ttcaggtccc ttctgcagct ggtcggagaa aagccttctc 720
tacctgtggt tctcatttgg ttgtggtatc tcttttctat gggacagtca tggtaatgta 780
tgtaagtcct acatatggga tcccaacttt attgcagaag atcctcacac tggtatattc 840
agtaacgact cctcttttta atcctctgat ctatactctt cgtaataagg acatgaaact 900
cgctctgaga aatgtcctgt ttggaatgag aattcgtcaa aattcgtgag ccaaagat   958
```

<210> 26
<211> 314
<212> PRT
<213> Homo sapiens

<400> 26

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Met Asn Arg Ser Ala Thr His Ile Val Thr Glu Phe Ile Leu Leu Gly
  1               5                  10                  15
```

Phe Pro Gly Cys Trp Lys Ile Gln Ile Phe Leu Phe Ser Leu Phe Leu
20 25 30

Val Ile Tyr Val Leu Thr Leu Leu Gly Asn Gly Ala Ile Ile Tyr Ala
35 40 45

Val Arg Cys Asn Pro Leu Leu His Thr Pro Met Tyr Phe Leu Leu Gly
50 55 60

Asn Phe Ala Phe Leu Glu Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn
65 70 75 80

Met Leu Val Asn Ile Leu Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly
85 90 95

Cys Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys
100 105 110

Leu Phe Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys His
115 120 125

Pro Leu Gln Tyr Pro Ala Ile Met Thr Val Arg Phe Cys Gly Lys Leu
130 135 140

Val Ser Phe Cys Trp Leu Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile
145 150 155 160

Phe Tyr Ile Ser Gln Leu Pro Phe Cys Gly Pro Asn Ile Ile Asp His
165 170 175

Phe Leu Cys Asp Met Asp Pro Leu Met Ala Leu Ser Cys Ala Pro Ala
180 185 190

Pro Ile Thr Glu Cys Ile Phe Tyr Thr Gln Ser Ser Leu Val Leu Phe
195 200 205

Phe Thr Ser Met Tyr Ile Leu Arg Ser Tyr Ile Leu Leu Leu Thr Ala
210 215 220

Val Phe Gln Val Pro Ser Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Val Val Val Ser Leu Phe Tyr Gly Thr Val Met
245 250 255

Val Met Tyr Val Ser Pro Thr Tyr Gly Ile Pro Thr Leu Leu Gln Lys
260 265 270

Ile Leu Thr Leu Val Tyr Ser Val Thr Thr Pro Leu Phe Asn Pro Leu
275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Leu Ala Leu Arg Asn Val
290 295 300

Leu Phe Gly Met Arg Ile Arg Gln Asn Ser
305 310

<210> 27
<211> 957
<212> DNA
<213> Homo sapiens

<400> 27
aacaatgcat tttgtgactg agtttgtcct cctgggtttc catggtcaaa gggagatgca 60
gagctgcttc ttctcattca tcctggttct ctatctcctg acactgctag ggaatggagc 120
tattgtctgt gcagtgaaat tggacaggcg gctccacaca cccatgtaca tccttctggg 180
aaactttgcc tttctagaga tctggtacat ttcctccact gtcccaaaca tgctagtcaa 240
tatcctctct gagattaaaa ccatctcctt ctctggttgc ttcctgcaat tctatttctt 300
tttttcactg ggtacaacag agtgtttctt tttatcagtt atggcttatg atcggtacct 360
ggccatctgt cgtccattac actacccctc catcatgact gggaagttct gtataattct 420
ggtctgtgta tgctgggtag gcggatttct ctgctatcca gtccctattg ttcttatctc 480
ccaacttccc ttctgtgggc ccaacatcat tgaccacttg gtgtgtgacc caggcccatt 540
gtttgcactg gcctgcatct ctgctccttc cactgagctt atctgttaca ccttcaactc 600
gatgattatc tttgggccct tcctctccat cttgggatct tacactctgg tcatcagagc 660
tgtgctttgt attccctctg gtgctggtcg aactaaagct ttctccacat gtgggtccca 720
cctaatggtg gtgtctctat tctatggaac ccttatggtg atgtatgtga gcccaacatc 780
agggaaccca gcaggaatgc agaagatcat cactctggta tacacagcaa tgactccatt 840
cttaaatccc cttatctata gtcttcgaaa caaagacatg aaagatgctc taaagagagt 900
cctggggtta acagttagcc aaaactgaga tatctttgaa aaagaagcca aattggc 957

<210> 28
<211> 307
<212> PRT
<213> Homo sapiens

<400> 28
Met His Phe Val Thr Glu Phe Val Leu Leu Gly Phe His Gly Gln Arg
1 5 10 15

Glu Met Gln Ser Cys Phe Phe Ser Phe Ile Leu Val Leu Tyr Leu Leu
20 25 30

Thr Leu Leu Gly Asn Gly Ala Ile Val Cys Ala Val Lys Leu Asp Arg

35 40 45

Arg Leu His Thr Pro Met Tyr Ile Leu Leu Gly Asn Phe Ala Phe Leu
50 55 60

Glu Ile Trp Tyr Ile Ser Ser Thr Val Pro Asn Met Leu Val Asn Ile
65 70 75 80

Leu Ser Glu Ile Lys Thr Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe
85 90 95

Tyr Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Phe Phe Leu Ser Val
100 105 110

Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Arg Pro Leu His Tyr Pro
115 120 125

Ser Ile Met Thr Gly Lys Phe Cys Ile Ile Leu Val Cys Val Cys Trp
130 135 140

Val Gly Gly Phe Leu Cys Tyr Pro Val Pro Ile Val Leu Ile Ser Gln
145 150 155 160

Leu Pro Phe Cys Gly Pro Asn Ile Ile Asp His Leu Val Cys Asp Pro
165 170 175

Gly Pro Leu Phe Ala Leu Ala Cys Ile Ser Ala Pro Ser Thr Glu Leu
180 185 190

Ile Cys Tyr Thr Phe Asn Ser Met Ile Ile Phe Gly Pro Phe Leu Ser
195 200 205

Ile Leu Gly Ser Tyr Thr Leu Val Ile Arg Ala Val Leu Cys Ile Pro
210 215 220

Ser Gly Ala Gly Arg Thr Lys Ala Phe Ser Thr Cys Gly Ser His Leu
225 230 235 240

Met Val Val Ser Leu Phe Tyr Gly Thr Leu Met Val Met Tyr Val Ser
245 250 255

Pro Thr Ser Gly Asn Pro Ala Gly Met Gln Lys Ile Ile Thr Leu Val
260 265 270

Tyr Thr Ala Met Thr Pro Phe Leu Asn Pro Leu Ile Tyr Ser Leu Arg
275 280 285

Asn Lys Asp Met Lys Asp Ala Leu Lys Arg Val Leu Gly Leu Thr Val

290 295 300

Ser Gln Asn
305

<210> 29
<211> 987
<212> DNA
<213> Homo sapiens

<400> 29
gcaaaccacc tgacatcatg gaaggaaaga atcaaacagc tccatctgaa ttcatcatct 60
tggggttcga ccacctgaat gaattgcagt atttactctt caccatcttc tttctgacct 120
acatatgcac tttaggaggc aatgttttta tcattgtggt gaccatagct gattcccacc 180
tacacacacc catgtattat ttcctaggaa atcttgccct tattgacatc tgctacacta 240
ctactaatgt cccccagatg atggtgcatc ttctgtcaga gaagaaaatc atttcctatg 300
gaggctgtgt gacccagctc tttgcattca ttttctttgt tggctcagag tgtctcctcc 360
tggcagcaat ggcatatgat cgatatattg ctatctgtaa gccgttaagg tactcattta 420
ttatgaacaa ggccctgtgc agctggttag cagcctcatg ctggacatgt gggtttctca 480
actcagtgtt gcacaccgtt ctgaccttcc acctgccctt ctgtggtaac aatcagatca 540
attatttctt ctgtgacata cctcccttgc tcatcttgtc ttgtggtgat acttccctca 600
atgaactggc tttgctgtcc attgggatcc tcataagctg gactcctttc ctgtgcatca 660
tcctttccta cctttacatc atctccacca tcctgaggat ccgttcctct gaggggaggc 720
acaaagcctt ttccacctgt gcctcccacc tgctcattgt tattctctat tatggcagtg 780
ctatcttcac gtatgtgagg cccatctcat cttactctct agagaaagat agattgatct 840
cagtgctgta tagtgttgtc acacccatgc tgaatcctgt aatttatacg ctaaggaata 900
aggacatcaa agaggctgtg aaggccatag ggagaaagtg gcagccacca gttttctctt 960
ctgatatata acctctctta tgtgtga 987

<210> 30
<211> 317
<212> PRT
<213> Homo sapiens

<400> 30
Met Glu Gly Lys Asn Gln Thr Ala Pro Ser Glu Phe Ile Ile Leu Gly
1 5 10 15

Phe Asp His Leu Asn Glu Leu Gln Tyr Leu Leu Phe Thr Ile Phe Phe
20 25 30

Leu Thr Tyr Ile Cys Thr Leu Gly Gly Asn Val Phe Ile Ile Val Val
35 40 45

Thr Ile Ala Asp Ser His Leu His Thr Pro Met Tyr Tyr Phe Leu Gly
50 55 60

Asn Leu Ala Leu Ile Asp Ile Cys Tyr Thr Thr Thr Asn Val Pro Gln
65 70 75 80

Met Met Val His Leu Leu Ser Glu Lys Lys Ile Ile Ser Tyr Gly Gly
85 90 95

Cys Val Thr Gln Leu Phe Ala Phe Ile Phe Phe Val Gly Ser Glu Cys
100 105 110

Leu Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ile Ala Ile Cys Lys
115 120 125

Pro Leu Arg Tyr Ser Phe Ile Met Asn Lys Ala Leu Cys Ser Trp Leu
130 135 140

Ala Ala Ser Cys Trp Thr Cys Gly Phe Leu Asn Ser Val Leu His Thr
145 150 155 160

Val Leu Thr Phe His Leu Pro Phe Cys Gly Asn Asn Gln Ile Asn Tyr
165 170 175

Phe Phe Cys Asp Ile Pro Pro Leu Leu Ile Leu Ser Cys Gly Asp Thr
180 185 190

Ser Leu Asn Glu Leu Ala Leu Leu Ser Ile Gly Ile Leu Ile Ser Trp
195 200 205

Thr Pro Phe Leu Cys Ile Ile Leu Ser Tyr Leu Tyr Ile Ile Ser Thr
210 215 220

Ile Leu Arg Ile Arg Ser Ser Glu Gly Arg His Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Leu Ile Val Ile Leu Tyr Tyr Gly Ser Ala Ile
245 250 255

Phe Thr Tyr Val Arg Pro Ile Ser Ser Tyr Ser Leu Glu Lys Asp Arg
260 265 270

Leu Ile Ser Val Leu Tyr Ser Val Val Thr Pro Met Leu Asn Pro Val
275 280 285

Ile Tyr Thr Leu Arg Asn Lys Asp Ile Lys Glu Ala Val Lys Ala Ile
290 295 300

Gly Arg Lys Trp Gln Pro Pro Val Phe Ser Ser Asp Ile
305 310 315

<210> 31
<211> 966
<212> DNA
<213> Homo sapiens

<400> 31
ggccatggta ccagaagaga gaaaccagag ctctgtgacc acattcatcc tgttgggttt 60
ctcagaatat ccacacctcc aggcgcccct cttcctggtg ttcttgacca cctacactgt 120
cgctctggtg ggaaacctgg gcataattgt ggttgtaaga atcaatccta agctccatac 180
caccatgtac tttttcctca gtcatctatc ctttttggat acttgttatt ccaatgtatt 240
tacacccaaa ttgttagaga ttttggttgt ggaagacaga actatctcct tcaaaggatg 300
catggtacaa tttttctttg gttgtgcatt tgtaatcaca gaaatgttca tgttagcggt 360
gatggcttat gacttgttta tggctgtttg taacccccctg ctctacacag tggctatgtc 420
tcctaagctc tgtgctctcc tggtagctgg aacttacaca tggggtggac tctgttccct 480
gacactcact tattctcttt tggtgttatc ctactgtgga tctaacatca taaatcactt 540
tggctgtgag tactctgcca ttctttctct atcctgctct gatccctact tcaaccagat 600
ggcgtgttta gtcatttcta tattcagtga agcttgtagc ctcctggcca tccttgcctt 660
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catctccacc tgtgcctccc acctgaccac cgtctccatt ttccatgggg tcatcctgct 780
cctttactgt gtgcccaact ccaaaagctc atggctcctg gtcaaagtgg ctactgtact 840
ttttacagtc ataatcccta tgctgaatcc cctgatctac agccttagga acaaagatgt 900
aaaagggacc gtcaggaagt tgataaactc ccaatcacct tttcactcaa aataattcaa 960
ataaat 966

<210> 32
<211> 316
<212> PRT
<213> Homo sapiens

<400> 32
Met Val Pro Glu Glu Arg Asn Gln Ser Ser Val Thr Thr Phe Ile Leu
1 5 10 15

Leu Gly Phe Ser Glu Tyr Pro His Leu Gln Ala Pro Leu Phe Leu Val
20 25 30

Phe Leu Thr Thr Tyr Thr Val Ala Leu Val Gly Asn Leu Gly Ile Ile
35 40 45

Val Val Val Arg Ile Asn Pro Lys Leu His Thr Thr Met Tyr Phe Phe
50 55 60

Leu Ser His Leu Ser Phe Leu Asp Thr Cys Tyr Ser Asn Val Phe Thr
65 70 75 80

Pro Lys Leu Leu Glu Ile Leu Val Val Glu Asp Arg Thr Ile Ser Phe
85 90 95

Lys Gly Cys Met Val Gln Phe Phe Phe Gly Cys Ala Phe Val Ile Thr
100 105 110

Glu Met Phe Met Leu Ala Val Met Ala Tyr Asp Leu Phe Met Ala Val
115 120 125

Cys Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Pro Lys Leu Cys Ala
130 135 140

Leu Leu Val Ala Gly Thr Tyr Thr Trp Gly Gly Leu Cys Ser Leu Thr
145 150 155 160

Leu Thr Tyr Ser Leu Leu Val Leu Ser Tyr Cys Gly Ser Asn Ile Ile
165 170 175

Asn His Phe Gly Cys Glu Tyr Ser Ala Ile Leu Ser Leu Ser Cys Ser
180 185 190

Asp Pro Tyr Phe Asn Gln Met Ala Cys Leu Val Ile Ser Ile Phe Ser
195 200 205

Glu Ala Cys Ser Leu Leu Ala Ile Leu Ala Phe Tyr Val Phe Ile Val
210 215 220

Ala Thr Val Ile Lys Met Leu Ser Thr Gly Gly Pro Gln Lys Ala Ile
225 230 235 240

Ser Thr Cys Ala Ser His Leu Thr Thr Val Ser Ile Phe His Gly Val
245 250 255

Ile Leu Leu Leu Tyr Cys Val Pro Asn Ser Lys Ser Ser Trp Leu Leu
260 265 270

Val Lys Val Ala Thr Val Leu Phe Thr Val Ile Ile Pro Met Leu Asn
275 280 285

Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Thr Val Arg
290 295 300

Lys Leu Ile Asn Ser Gln Ser Pro Phe His Ser Lys
305 310 315

<210> 33
<211> 1019

<212> DNA
<213> Homo sapiens

<400> 33
tcccttccaa aatcgatgaa tgagacaaat cattctcggg tgacagaatt tgtgttgctg 60
ggactgtcta gttcaaggga gctccaacct ttcttgtttc ttacattttc actactttat 120
ctagcaattc tgttgggcaa ctttctcatc atcctcactg tgacctcaga ttcccgcctt 180
cacaccccca tgtactttct gcttgcaaac ctgtcattta tagacgtatg tgttgcctct 240
tttgctaccc ctaaaatgat tgcagacttt ctggttgagc gcaagactat ttcttttgat 300
gcctgcctgg cccagatttt ctttgttcat ctcttcactg gcagtgaaat ggtgctccta 360
gtttccatgg cctatgaccg ttatgttgct atatgcaaac ctctccacta catgacagtc 420
atgagccgtc gtgtatgtgt tgtgctcgtc ctcatttcat ggtttgtggg cttcatccat 480
actaccagcc agttggcatt cactgttaat ctgccatttt gtggtcctaa taaggtagac 540
agttttttct gtgaccttcc tctagtgacc aagttagcct gcatagacac ttatgttgtc 600
agcttactaa tagttgcaga tagtggcttt ctttctctga gttcctttct cctcttggtt 660
gtctcctaca ctgtaatact tgttacagtt aggaatcgct cctctgcaag catggcgaag 720
gcccgctcca cattgactgc tcacatcact gtggtcactt tattctttgg accatgcatt 780
ttcatctatg tgtggccctt cagcagttac tcagttgaca aagtccttgc tgtattctac 840
accatcttca cgcttatttt aaaccctgta atctacacgc taagaaacaa agaagtgaag 900
gcagctatgt caaaactgaa gagtcggtat ctgaagccta gtcaggtttc tgtagtcata 960
agaaatgttc ttttcctaga aacaaagtaa acttatgaga ctgttaccac tttagccct 1019

<210> 34
<211> 324
<212> PRT
<213> Homo sapiens

<400> 34
Met Asn Glu Thr Asn His Ser Arg Val Thr Glu Phe Val Leu Leu Gly
1 5 10 15

Leu Ser Ser Ser Arg Glu Leu Gln Pro Phe Leu Phe Leu Thr Phe Ser
20 25 30

Leu Leu Tyr Leu Ala Ile Leu Leu Gly Asn Phe Leu Ile Ile Leu Thr
35 40 45

Val Thr Ser Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ala
50 55 60

Asn Leu Ser Phe Ile Asp Val Cys Val Ala Ser Phe Ala Thr Pro Lys
65 70 75 80

Met Ile Ala Asp Phe Leu Val Glu Arg Lys Thr Ile Ser Phe Asp Ala
85 90 95

Cys Leu Ala Gln Ile Phe Phe Val His Leu Phe Thr Gly Ser Glu Met

100 105 110

Val Leu Leu Val Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys
115 120 125

Pro Leu His Tyr Met Thr Val Met Ser Arg Arg Val Cys Val Val Leu
130 135 140

Val Leu Ile Ser Trp Phe Val Gly Phe Ile His Thr Thr Ser Gln Leu
145 150 155 160

Ala Phe Thr Val Asn Leu Pro Phe Cys Gly Pro Asn Lys Val Asp Ser
165 170 175

Phe Phe Cys Asp Leu Pro Leu Val Thr Lys Leu Ala Cys Ile Asp Thr
180 185 190

Tyr Val Val Ser Leu Leu Ile Val Ala Asp Ser Gly Phe Leu Ser Leu
195 200 205

Ser Ser Phe Leu Leu Leu Val Val Ser Tyr Thr Val Ile Leu Val Thr
210 215 220

Val Arg Asn Arg Ser Ser Ala Ser Met Ala Lys Ala Arg Ser Thr Leu
225 230 235 240

Thr Ala His Ile Thr Val Val Thr Leu Phe Phe Gly Pro Cys Ile Phe
245 250 255

Ile Tyr Val Trp Pro Phe Ser Ser Tyr Ser Val Asp Lys Val Leu Ala
260 265 270

Val Phe Tyr Thr Ile Phe Thr Leu Ile Leu Asn Pro Val Ile Tyr Thr
275 280 285

Leu Arg Asn Lys Glu Val Lys Ala Ala Met Ser Lys Leu Lys Ser Arg
290 295 300

Tyr Leu Lys Pro Ser Gln Val Ser Val Val Ile Arg Asn Val Leu Phe
305 310 315 320

Leu Glu Thr Lys

<210> 35
<211> 986
<212> DNA

<213> Homo sapiens

<400> 35
catcactgtg tcctatgccc atgtggcagc tgcagtcctg cgaatccgct ctgcagaggg 60
cagaaagaaa gccttctcca cgtgtagttc ccacctcact gtggtgggca tcttctatgg 120
gacgggcgtc ttcagctaca caaggctggg ttcagtggag tcttcggaca aggacaaggg 180
cattggcatc ctcaacactg tcatcagccc catgccgaac ccactcatct actggacatc 240
tctgctggac gtcgggtgca tcagtcactg ttcctccgat gctggcgtgt ctccaggccc 300
accagtgcag agttccctat gctgcctgca gttcacagct cttctttccc cacctcctgg 360
ctggggtgga ctgtcacctc ttaatagcca tggcctatga ccgctacctg gctatctgtc 420
agcttctcac caacagcact cgcatgagct gtgaagtcca gggtgccctg gtgggaattt 480
gctgcactgt ctccttcatc aatgctctga ctcacacagt ggctgtgtct gcgcttgact 540
tctgtggccc taatgtggtc aaccacttct actgtgacct cccacctctt ttccagctct 600
cttgctccag catccacctc aatgggcagc tgctgcttgt gggggccacc ttcataggag 660
tgatccccat gatctttatc tcagtgtcct atgcccacgt cacagctgca atattacaaa 720
tccgctcagc tgaggggagg aagaaggctt tctccacatg tggctcccac ctcactgtgg 780
tccgaatctt ttatggaact ggcttcttca gttacatgtg tctgggctca gtctcagcct 840
cagacaaaga taaggggatt gggatcctca acactatcct cagtcccatg ctgaacccag 900
tcatttacag cctccagaac cctgatgtgc agggcaccct gaaaagggtg ctgacaggga 960
agaggccccc agcttgagaa gatggg 986

<210> 36
<211> 320
<212> PRT
<213> Homo sapiens

<400> 36
Met Pro Met Trp Gln Leu Gln Ser Cys Glu Ser Ala Leu Gln Arg Ala
1 5 10 15

Glu Arg Lys Pro Ser Pro Arg Val Val Pro Thr Ser Leu Trp Trp Ala
20 25 30

Ser Ser Met Gly Arg Ala Ser Ser Ala Thr Gln Gly Trp Val Gln Trp
35 40 45

Ser Leu Arg Thr Arg Thr Arg Ala Leu Ala Ser Ser Thr Leu Ser Ser
50 55 60

Ala Pro Cys Arg Thr His Ser Ser Thr Gly His Leu Cys Trp Thr Ser
65 70 75 80

Gly Ala Ser Val Thr Val Pro Pro Met Leu Ala Cys Leu Gln Ala His
85 90 95

Gln Cys Arg Val Pro Tyr Ala Ala Cys Ser Ser Gln Leu Phe Phe Pro
100 105 110

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His Leu Leu Ala Gly Val Asp Cys His Leu Leu Ile Ala Met Ala Tyr
        115                 120                 125

Asp Arg Tyr Leu Ala Ile Cys Gln Leu Leu Thr Asn Ser Thr Arg Met
    130                 135                 140

Ser Cys Glu Val Gln Gly Ala Leu Val Gly Ile Cys Cys Thr Val Ser
145                 150                 155                 160

Phe Ile Asn Ala Leu Thr His Thr Val Ala Val Ser Ala Leu Asp Phe
                165                 170                 175

Cys Gly Pro Asn Val Val Asn His Phe Tyr Cys Asp Leu Pro Pro Leu
            180                 185                 190

Phe Gln Leu Ser Cys Ser Ser Ile His Leu Asn Gly Gln Leu Leu Leu
        195                 200                 205

Val Gly Ala Thr Phe Ile Gly Val Ile Pro Met Ile Phe Ile Ser Val
    210                 215                 220

Ser Tyr Ala His Val Thr Ala Ala Ile Leu Gln Ile Arg Ser Ala Glu
225                 230                 235                 240

Gly Arg Lys Lys Ala Phe Ser Thr Cys Gly Ser His Leu Thr Val Val
                245                 250                 255

Arg Ile Phe Tyr Gly Thr Gly Phe Phe Ser Tyr Met Cys Leu Gly Ser
            260                 265                 270

Val Ser Ala Ser Asp Lys Asp Lys Gly Ile Gly Ile Leu Asn Thr Ile
        275                 280                 285

Leu Ser Pro Met Leu Asn Pro Val Ile Tyr Ser Leu Gln Asn Pro Asp
    290                 295                 300

Val Gln Gly Thr Leu Lys Arg Val Leu Thr Gly Lys Arg Pro Pro Ala
305                 310                 315                 320
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<210> 37
<211> 1023
<212> DNA
<213> Homo sapiens

<400> 37
gtcataatat gaactgtaac tttatgcata tcttcaagtt tgttctagat ttcaacatga 60
agaatgtcac tgaagttacc ttatttgtac tgaagggctt cacagacaat cttgaactgc 120
agactatctt cttcttcctg tttctagcaa tctacctctt cactctcatg ggaaatttag 180
gactgatttt agtggtcatt agggattccc agctccacaa acccatgtac tattttctga 240
gtatgttgtc ttctgtggat gcctgctatt cctcagttat taccccaaat atgttagtag 300
attttacgac aaagaataaa gtcatttcat tccttggatg tgtagcacag gtgtttcttg 360
cttgtagttt tggaaccaca gaatgctttc tcttggctgc aatggcttat gatcgctatg 420
tagccatcta caacctctc ctgtattcag tgagcatgtc acccagagtc tacatgccac 480
tcatcaatgc ttcctatgtt gctggcattt tacatgctac tatacataca gtggctacat 540
ttagcctatc cttctgtgga gccaatgaaa ttaggcgtgt cttttgtgat atccctcctc 600
tccttgctat ttcttattct gacactcaca caaaccagct tctactcttc tactttgtgg 660
gctctatcga gctggtcact atcctgattg ttctgatctc ctatggtttg attctgttgg 720
ccattctgaa gatgtattct gctgaaggga ggagaaaagt cttctccaca tgtggagctc 780
acctaactgg agtgtcaatt tattatggga caatcctctt catgtatgtg agaccaagtt 840
ccagctatgc ttcggaccat gacatgatag tgtcaatatt ttacaccatt gtgattccct 900
tgctgaatcc cgtcatctac agtttgagga acaaagatgt aaaagactca atgaaaaaaa 960
tgtttgggaa aaatcaggtt atcaataaag tatattttca tactaaaaaa taaattataa 1020
aag 1023

<210> 38
<211> 334
<212> PRT
<213> Homo sapiens

<400> 38
Met Asn Cys Asn Phe Met His Ile Phe Lys Phe Val Leu Asp Phe Asn
1 5 10 15

Met Lys Asn Val Thr Glu Val Thr Leu Phe Val Leu Lys Gly Phe Thr
20 25 30

Asp Asn Leu Glu Leu Gln Thr Ile Phe Phe Phe Leu Phe Leu Ala Ile
35 40 45

Tyr Leu Phe Thr Leu Met Gly Asn Leu Gly Leu Ile Leu Val Val Ile
50 55 60

Arg Asp Ser Gln Leu His Lys Pro Met Tyr Tyr Phe Leu Ser Met Leu
65 70 75 80

Ser Ser Val Asp Ala Cys Tyr Ser Ser Val Ile Thr Pro Asn Met Leu
85 90 95

Val Asp Phe Thr Thr Lys Asn Lys Val Ile Ser Phe Leu Gly Cys Val
100 105 110

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Ala Gln Val Phe Leu Ala Cys Ser Phe Gly Thr Thr Glu Cys Phe Leu
        115                 120                 125

Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Tyr Asn Pro Leu
    130                 135                 140

Leu Tyr Ser Val Ser Met Ser Pro Arg Val Tyr Met Pro Leu Ile Asn
145                 150                 155                 160

Ala Ser Tyr Val Ala Gly Ile Leu His Ala Thr Ile His Thr Val Ala
                165                 170                 175

Thr Phe Ser Leu Ser Phe Cys Gly Ala Asn Glu Ile Arg Arg Val Phe
            180                 185                 190

Cys Asp Ile Pro Pro Leu Leu Ala Ile Ser Tyr Ser Asp Thr His Thr
        195                 200                 205

Asn Gln Leu Leu Leu Phe Tyr Phe Val Gly Ser Ile Glu Leu Val Thr
    210                 215                 220

Ile Leu Ile Val Leu Ile Ser Tyr Gly Leu Ile Leu Leu Ala Ile Leu
225                 230                 235                 240

Lys Met Tyr Ser Ala Glu Gly Arg Arg Lys Val Phe Ser Thr Cys Gly
                245                 250                 255

Ala His Leu Thr Gly Val Ser Ile Tyr Tyr Gly Thr Ile Leu Phe Met
            260                 265                 270

Tyr Val Arg Pro Ser Ser Ser Tyr Ala Ser Asp His Asp Met Ile Val
        275                 280                 285

Ser Ile Phe Tyr Thr Ile Val Ile Pro Leu Leu Asn Pro Val Ile Tyr
    290                 295                 300

Ser Leu Arg Asn Lys Asp Val Lys Asp Ser Met Lys Lys Met Phe Gly
305                 310                 315                 320

Lys Asn Gln Val Ile Asn Lys Val Tyr Phe His Thr Lys Lys
                325                 330
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<210> 39
<211> 946
<212> DNA
<213> Homo sapiens

<400> 39
atggccagaa aagatatggc tcacatcaat tgcacccagg cgacagagtt tattcttgtg 60
ggcctcacag accatcagga gttgaagatg cccctctttg tgctattctt atccatctac 120
ctcttcacag tggtaggcaa cttgggtttg atcctactca ttagagcgga tacaagtctc 180
aacacaccaa tgtacttctt tcttagcaac ctagcttttg tggatttctg ttactcttct 240
gtcattacac ccaaaatgct tgggaatttc ttgtacaaac aaaatgttat atcctttgat 300
gcatgtgcta ctcaactggg ctgctttctc accttcatga tatcagaatc cttgctactg 360
gcttccatgg cctatgaccg atatgtggcc atttgtaacc ctctattgta tatggttgta 420
atgactccag gaatctgcat tcaacttgta gcagttcctt atagctatag cttcctaatg 480
gcactatttc acaccatcct caccttccgc ctctcctatt gccactccaa cattgtcaac 540
catttctatt gtgatgacat gcctctcctc aggctaactt gctcagacac tcgcttcaaa 600
cagctctgga tctttgcctg tgctggtatc atgttcattt cctcccttct gattgtcttt 660
gtctcctaca tgttcatcat ttctgccatc ctgaggatgc attcagctga gggaagacag 720
aaggctttct cgacgtgtgg ctctcacatg ctggcagtca ccatattcta tgggaccctc 780
atttttatgt acttacagcc tagctctagc catgccctgg acacagacaa gatggcctct 840
gtcttctaca cagtgatcat tcccatgttg aatcccttaa tctatagcct ccagaataag 900
gaggtgaaag aagctctgaa gaaaatcatt atcaataaaa actaga 946

<210> 40
<211> 314
<212> PRT
<213> Homo sapiens

<400> 40
Met Ala Arg Lys Asp Met Ala His Ile Asn Cys Thr Gln Ala Thr Glu
1 5 10 15

Phe Ile Leu Val Gly Leu Thr Asp His Gln Glu Leu Lys Met Pro Leu
20 25 30

Phe Val Leu Phe Leu Ser Ile Tyr Leu Phe Thr Val Val Gly Asn Leu
35 40 45

Gly Leu Ile Leu Leu Ile Arg Ala Asp Thr Ser Leu Asn Thr Pro Met
50 55 60

Tyr Phe Phe Leu Ser Asn Leu Ala Phe Val Asp Phe Cys Tyr Ser Ser
65 70 75 80

Val Ile Thr Pro Lys Met Leu Gly Asn Phe Leu Tyr Lys Gln Asn Val
85 90 95

Ile Ser Phe Asp Ala Cys Ala Thr Gln Leu Gly Cys Phe Leu Thr Phe
100 105 110

Met Ile Ser Glu Ser Leu Leu Leu Ala Ser Met Ala Tyr Asp Arg Tyr

115 120 125

Val Ala Ile Cys Asn Pro Leu Leu Tyr Met Val Val Met Thr Pro Gly
130 135 140

Ile Cys Ile Gln Leu Val Ala Val Pro Tyr Ser Tyr Ser Phe Leu Met
145 150 155 160

Ala Leu Phe His Thr Ile Leu Thr Phe Arg Leu Ser Tyr Cys His Ser
165 170 175

Asn Ile Val Asn His Phe Tyr Cys Asp Asp Met Pro Leu Leu Arg Leu
180 185 190

Thr Cys Ser Asp Thr Arg Phe Lys Gln Leu Trp Ile Phe Ala Cys Ala
195 200 205

Gly Ile Met Phe Ile Ser Ser Leu Leu Ile Val Phe Val Ser Tyr Met
210 215 220

Phe Ile Ile Ser Ala Ile Leu Arg Met His Ser Ala Glu Gly Arg Gln
225 230 235 240

Lys Ala Phe Ser Thr Cys Gly Ser His Met Leu Ala Val Thr Ile Phe
245 250 255

Tyr Gly Thr Leu Ile Phe Met Tyr Leu Gln Pro Ser Ser Ser His Ala
260 265 270

Leu Asp Thr Asp Lys Met Ala Ser Val Phe Tyr Thr Val Ile Ile Pro
275 280 285

Met Leu Asn Pro Leu Ile Tyr Ser Leu Gln Asn Lys Glu Val Lys Glu
290 295 300

Ala Leu Lys Lys Ile Ile Ile Asn Lys Asn
305 310

<210> 41
<211> 952
<212> DNA
<213> Homo sapiens

<400> 41
cctatcatag ccacttcaaa tggaaatctg gtccacgcag catacttcct tttggtgggt 60
atccctggcc tggggcctac catacacttt tggctggctt tcccactgtg ttttatgtat 120
gccttggcca ccctgggtaa cctgaccatt gtcctcatca ttcgtgtgga gaggcgactg 180

catgagccca tgtacctctt cctggccatg ctttccacta ttgacctagt cctctcctct 240
atcaccatgc ccaagatggc cagtcttttc ctgatgggca tccaggagat cgagttcaac 300
atttgcctgg cccagatgtt ccttatccat gctctgtcag ccgtggagtc agctgtcctg 360
ctggccatgg cttttgaccg ctttgtggcc atttgccacc cattgcgcca tgcttctgtg 420
ctgacagggt gtactgtggc caagattgga ctatctgccc tgaccagggg gtttgtattc 480
ttcttcccac tgcccttcat cctcaagtgg ttgtcctact gccaaacaca tactgtcaca 540
cactccttct gtctgcacca agatattatg aagctgtcct gtactgacac cagggtcaat 600
gtggtttatg gactcttcat catcctctca gtcatgggtg tggactctct cttcattggc 660
ttctcatata tcctcatcct gtgggctgtt ttggagctgt cctctcggag ggcagcactc 720
aaggctttca acacctgcat ctcccacctc tgtgctgttc tggtcttcta tgtacccctc 780
attgggctct cggtggtgca taggctgggt ggtcccacct ccctcctcca tgtggttatg 840
gctaatacct acttgctgct accacctgta gtcaaccccc ttgtctatgg agccaagacc 900
aaagagatct gttcaagggt cctctgtatg ttctcacaag gtggcaagtg ag 952

<210> 42
<211> 316
<212> PRT
<213> Homo sapiens

<400> 42
Pro Ile Ile Ala Thr Ser Asn Gly Asn Leu Val His Ala Ala Tyr Phe
1 5 10 15

Leu Leu Val Gly Ile Pro Gly Leu Gly Pro Thr Ile His Phe Trp Leu
20 25 30

Ala Phe Pro Leu Cys Phe Met Tyr Ala Leu Ala Thr Leu Gly Asn Leu
35 40 45

Thr Ile Val Leu Ile Ile Arg Val Glu Arg Arg Leu His Glu Pro Met
50 55 60

Tyr Leu Phe Leu Ala Met Leu Ser Thr Ile Asp Leu Val Leu Ser Ser
65 70 75 80

Ile Thr Met Pro Lys Met Ala Ser Leu Phe Leu Met Gly Ile Gln Glu
85 90 95

Ile Glu Phe Asn Ile Cys Leu Ala Gln Met Phe Leu Ile His Ala Leu
100 105 110

Ser Ala Val Glu Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Phe
115 120 125

Val Ala Ile Cys His Pro Leu Arg His Ala Ser Val Leu Thr Gly Cys
130 135 140

Thr Val Ala Lys Ile Gly Leu Ser Ala Leu Thr Arg Gly Phe Val Phe
145 150 155 160

Phe Phe Pro Leu Pro Phe Ile Leu Lys Trp Leu Ser Tyr Cys Gln Thr
165 170 175

His Thr Val Thr His Ser Phe Cys Leu His Gln Asp Ile Met Lys Leu
180 185 190

Ser Cys Thr Asp Thr Arg Val Asn Val Val Tyr Gly Leu Phe Ile Ile
195 200 205

Leu Ser Val Met Gly Val Asp Ser Leu Phe Ile Gly Phe Ser Tyr Ile
210 215 220

Leu Ile Leu Trp Ala Val Leu Glu Leu Ser Ser Arg Arg Ala Ala Leu
225 230 235 240

Lys Ala Phe Asn Thr Cys Ile Ser His Leu Cys Ala Val Leu Val Phe
245 250 255

Tyr Val Pro Leu Ile Gly Leu Ser Val Val His Arg Leu Gly Gly Pro
260 265 270

Thr Ser Leu Leu His Val Val Met Ala Asn Thr Tyr Leu Leu Leu Pro
275 280 285

Pro Val Val Asn Pro Leu Val Tyr Gly Ala Lys Thr Lys Glu Ile Cys
290 295 300

Ser Arg Val Leu Cys Met Phe Ser Gln Gly Gly Lys
305 310 315

<210> 43
<211> 945
<212> DNA
<213> Homo sapiens

<400> 43
acgaattctt cctttcttct cactggattt tctggcatgg agcagcaata cccctggttt 60
tccatcccct tctcctcaat ctatgccatg gtgcttttgg gcaattgcat ggttctccat 120
gtgatatgga ctgagccaag cctgcaccag cctatgtttt acttcctgtc catgctggcc 180
ctcactgacc tgtgcatggg gctgtccact gtgtacacag tgctggggat cctgtggtgg 240
atcattcgag agatcagctt ggattcctgc attgcccagt cctatttcat ccatggtctg 300
tccttcatgg agtcctctgt cctcctcact atggcctttg accggtacat tgcaatttgc 360
aatccactac gttattcctc catcctgact aattccagaa ttatcaaaat tgggctcact 420
ataataggta ggagtttttt ctttattaca ccccccatca tctgtctgaa atttttaat 480

tactgtcatt tccacatcct ttctcactct ttctgcctgc accaggatct tctccgctta 540
gcctgttcag acatccgatt caatagttac tatgccctga tgctggttat ttgcatactg 600
ttgttggatg ctatactcat ccttttctcc tacatcctga ttcttaagtc agtcctggca 660
gttgcctctc aggaagagag gcataaatta tttcagacct gcatctccca catctgtgct 720
gtccttgtgt tctacatccc tatcattagc ctcacaatgg tgcaccgttt tggcaagcac 780
ctttcccccg tggcccacgt tctcattggc aacatctaca tccttttccc acctttaatg 840
aatcccatca tctacagtgt caagacccaa cagattcata ccagaatgct tagactcttt 900
tctctgaaaa gatattgaga gatattgaga tgtattgcct aaaaa 945

<210> 44
<211> 293
<212> PRT
<213> Homo sapiens

<400> 44
Met Glu Gln Gln Tyr Pro Trp Phe Ser Ile Pro Phe Ser Ser Ile Tyr
1 5 10 15

Ala Met Val Leu Leu Gly Asn Cys Met Val Leu His Val Ile Trp Thr
20 25 30

Glu Pro Ser Leu His Gln Pro Met Phe Tyr Phe Leu Ser Met Leu Ala
35 40 45

Leu Thr Asp Leu Cys Met Gly Leu Ser Thr Val Tyr Thr Val Leu Gly
50 55 60

Ile Leu Trp Trp Ile Ile Arg Glu Ile Ser Leu Asp Ser Cys Ile Ala
65 70 75 80

Gln Ser Tyr Phe Ile His Gly Leu Ser Phe Met Glu Ser Ser Val Leu
85 90 95

Leu Thr Met Ala Phe Asp Arg Tyr Ile Ala Ile Cys Asn Pro Leu Arg
100 105 110

Tyr Ser Ser Ile Leu Thr Asn Ser Arg Ile Ile Lys Ile Gly Leu Thr
115 120 125

Ile Ile Gly Arg Ser Phe Phe Phe Ile Thr Pro Pro Ile Ile Cys Leu
130 135 140

Lys Phe Phe Asn Tyr Cys His Phe His Ile Leu Ser His Ser Phe Cys
145 150 155 160

Leu His Gln Asp Leu Leu Arg Leu Ala Cys Ser Asp Ile Arg Phe Asn
165 170 175

Ser Tyr Tyr Ala Leu Met Leu Val Ile Cys Ile Leu Leu Leu Asp Ala
180 185 190

Ile Leu Ile Leu Phe Ser Tyr Ile Leu Ile Leu Lys Ser Val Leu Ala
195 200 205

Val Ala Ser Gln Glu Glu Arg His Lys Leu Phe Gln Thr Cys Ile Ser
210 215 220

His Ile Cys Ala Val Leu Val Phe Tyr Ile Pro Ile Ile Ser Leu Thr
225 230 235 240

Met Val His Arg Phe Gly Lys His Leu Ser Pro Val Ala His Val Leu
245 250 255

Ile Gly Asn Ile Tyr Ile Leu Phe Pro Pro Leu Met Asn Pro Ile Ile
260 265 270

Tyr Ser Val Lys Thr Gln Gln Ile His Thr Arg Met Leu Arg Leu Phe
275 280 285

Ser Leu Lys Arg Tyr
290

<210> 45
<211> 1040
<212> DNA
<213> Homo sapiens

<400> 45
atgagtgtca actgctctct gtggcaggaa ataagttgt ctgtcaaaca ctttgcattt 60
gccaagttct ctgaggttcc tgaagaatgc ttcctcctgt ttaccctgat tctcctcatg 120
ttcttagtat cactgacagg aaatgcactt ataacccttg ccatatgcac cagtccagcc 180
ctacacaccc ccatgtactt ctttctggcc aacttgtctc tcctggagat tggctacact 240
tgttctgtca taccgaagat gttgaagaac cttgtaactg aggcccgagg gatctctcgg 300
gaagggtgtg ccacacagat gtttttcttt atattctttg gtataactga gtgttgccta 360
ctggcagcta tggcctttga ccgctacatg gccatatgct ccccactcca ctatgcaacc 420
cgaatgagtc gtgaggtatg tgcccatttg gcaatagttt catggggaat gggatgcata 480
gtagggttgg gacagaccaa ttttattttc tccttaaact tctgtggacc atgtgagata 540
gaccacttct tctgtgacct tccacctgtc ctggcacttg cctgtggaga tacatcccaa 600
aatgaggctg caatcttcgt gacagtagtt ctctgcatat ctagcccatt tttgttgatc 660
atttattcct atgtcagaat tttgtttgca gtgctggtga tgccttcacc tgaggggcgc 720
cataaagctc tctccacctg ttcctcccat ctacttgtag tcacattgtt ctatggctca 780
gcatctatta cctacttgag gcccaagtct agccactcac caggaataga taaactcttg 840
gccctttttct acaccgcggt gacttccatg ctgaacccca tcatctatag cttaaggaac 900
aaggaagtga aggcagcact gagaagaact ctgagtctga agaaacctct ggcaataaat 960

aggtaacaga accttgcaga gctgctggct aatgagaatt tacaatgaat cagatgaaac 1020
aaataaaagg atattctaaa 1040

<210> 46
<211> 321
<212> PRT
<213> Homo sapiens

<400> 46

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Met Ser Val Asn Cys Ser Leu Trp Gln Glu Asn Lys Leu Ser Val Lys
 1               5                  10                  15

His Phe Ala Phe Ala Lys Phe Ser Glu Val Pro Glu Glu Cys Phe Leu
            20                  25                  30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
        35                  40                  45

Ala Leu Ile Thr Leu Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
    50                  55                  60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65                  70                  75                  80

Cys Ser Val Ile Pro Lys Met Leu Lys Asn Leu Val Thr Glu Ala Arg
                85                  90                  95

Gly Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Ile Phe
            100                 105                 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Phe Asp Arg
        115                 120                 125

Tyr Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser Arg
    130                 135                 140

Glu Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145                 150                 155                 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
                165                 170                 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
            180                 185                 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Thr
        195                 200                 205
```

Val Val Leu Cys Ile Ser Ser Pro Phe Leu Leu Ile Ile Tyr Ser Tyr
210 215 220

Val Arg Ile Leu Phe Ala Val Leu Val Met Pro Ser Pro Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Leu
245 250 255

Phe Tyr Gly Ser Ala Ser Ile Thr Tyr Leu Arg Pro Lys Ser Ser His
260 265 270

Ser Pro Gly Ile Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
290 295 300

Ala Ala Leu Arg Arg Thr Leu Ser Leu Lys Lys Pro Leu Ala Ile Asn
305 310 315 320

Arg

<210> 47
<211> 988
<212> DNA
<213> Homo sapiens

<400> 47
atgagtatca actgctctct gtggcaggag aacagcttgt ctgtcaaacg ctttgcattt 60
gccaagttct ctgaggtccc tggagaatgc ttcctcctat ttaccctcat cctcctcatg 120
ttcttagtat cactgacagg aaatgcactc atagcccttg tcatctgcac caatccatcc 180
ctacacaacc ccatgtattt ctttctggcc aacttgtctc tcctggagat tggctacact 240
tgctctgtca tacccaaaat gctacaaagc cttgtaagtg aggcccgaga aatctctcgg 300
gagggttgtg ccacacagat gtttttcttc acatttttg gtataactga gtgctgtcta 360
ctggcagcta tggcttatga ccgctgcatg gccatatgct ccccacttca ctatccaaca 420
cgaatgagta gtggggtatg tgcccatttg gcaatagttt catggggaat gggatgtata 480
gtagggttgg gacaaaccaa ttttattttc tccttggagt tttgtggacc ctgtgagata 540
gatcacttct tctgtgacct tccacctgtc ctggcacttg cttgtggcga tacatcccaa 600
aatgaggctg caatttttgt ggcagcagtt ctctgcatat ctagcccatt tttgttgatc 660
atttattcct atgtcagaat tctggttgca gtgctgctga tgccttcacc tgaggggcgc 720
cataaagctc tctccacctg ttcctcccat ctacttgtag tcacaatgtt ctatggctca 780
gcatctatta cttacttgag gcccaagtct agccactcac caggaatgga caaactcttg 840
gccctttttct acacagcggt gacatccatg ctgaacccca tcatctatag cttaaggaac 900
aaggaagtaa aggcagcact gagaaaaaca ctgagtctga agaaacctct ggcaataaat 960

aggtaacaga accttgcaga gctgctgg 988

<210> 48
<211> 321
<212> PRT
<213> Homo sapiens

<400> 48

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Met Ser Ile Asn Cys Ser Leu Trp Gln Glu Asn Ser Leu Ser Val Lys
 1               5                  10                  15

Arg Phe Ala Phe Ala Lys Phe Ser Glu Val Pro Gly Glu Cys Phe Leu
            20                  25                  30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
        35                  40                  45

Ala Leu Ile Ala Leu Val Ile Cys Thr Asn Pro Ser Leu His Asn Pro
    50                  55                  60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65                  70                  75                  80

Cys Ser Val Ile Pro Lys Met Leu Gln Ser Leu Val Ser Glu Ala Arg
                85                  90                  95

Glu Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Thr Phe
            100                 105                 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Tyr Asp Arg
        115                 120                 125

Cys Met Ala Ile Cys Ser Pro Leu His Tyr Pro Thr Arg Met Ser Ser
    130                 135                 140

Gly Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145                 150                 155                 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Glu Phe Cys Gly
                165                 170                 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
            180                 185                 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Ala
        195                 200                 205
```

210 215 220

Val Arg Ile Leu Ile Ala Val Leu Val Met Pro Ser Arg Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Leu
245 250 255

Phe Tyr Gly Ser Thr Ser Ala Thr Tyr Leu Arg Pro Lys Ser Asp His
260 265 270

Ser Pro Glu Val Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
290 295 300

Ala Ala Leu Arg Lys Thr Leu Ser Leu Lys Lys Val Leu Ile Met Asn
305 310 315 320

Arg

<210> 51
<211> 983
<212> DNA
<213> Homo sapiens

<400> 51
gagatgagta tcaactgctc tctgtggcag gagaacagct tgtctgtcaa acgctttgca 60
tttgccaagt tctctgaggt ccctggagaa tgcttcctcc tatttaccct catcctcctc 120
atgttcttag tatcactgac aggaaattca ctcatagccc ttgccatctg caccagtcca 180
gccctacata ccccaatgta cttctttctg gccaatttgt ctctcctgga gatcggctac 240
acttgctctg tcatacccaa gatgttacag agccttgtaa gtgaggcccg agggatctca 300
cgggaagggt gtgccacaca gatgtttttc tttatattct ttggtataac tgagtgctgt 360
ctattggcag ccatggcttt tgaccgctac atggccatat gctccccact ccactatgca 420
acacgaatga gtcgtggggt atgtgcccat ttggccatag tttcatgggg aatgggatgt 480
atagtagggt tgggacagac caattttatt ttctcgttga acttctgtgg accctgtgag 540
atagaccact tcttctgtga ccttccacct gtcctggcac ttgcctgtgg agatacatcc 600
caaaatgagg ctgcaatttt tgtggcggca gtcctctgca tatttagtcc atttttgctg 660
attatttctt cctatgtcag aattctgatt gcagtgctgg taatgccctc acgtgagggg 720
cgccataaag ctctctccac ctgttcttcc catctacttg tagtcacact cttctatggc 780
tcaacgtctg ccacctattt gaggcccaaa tctgatcact caccagaagt ggataaactc 840
ttggcccttt tctacacagc ggtgacatcc atgctgaacc ccatcatcta tagcttaagg 900
aacaaggaag tgaaggcagc actgagaaaa acactgagtc tgaagaaagt tctgataatg 960
aataggtaac tgaggatcct gaa 983

<210> 52
<211> 321
<212> PRT
<213> Homo sapiens

<400> 52
Met Ser Ile Asn Cys Ser Leu Trp Gln Glu Asn Ser Leu Ser Val Lys
1 5 10 15

Arg Phe Ala Phe Ala Lys Phe Ser Glu Val Pro Gly Glu Cys Phe Leu
20 25 30

Leu Phe Thr Leu Ile Leu Leu Met Phe Leu Val Ser Leu Thr Gly Asn
35 40 45

Ser Leu Ile Ala Leu Ala Ile Cys Thr Ser Pro Ala Leu His Thr Pro
50 55 60

Met Tyr Phe Phe Leu Ala Asn Leu Ser Leu Leu Glu Ile Gly Tyr Thr
65 70 75 80

Cys Ser Val Ile Pro Lys Met Leu Gln Ser Leu Val Ser Glu Ala Arg
85 90 95

Gly Ile Ser Arg Glu Gly Cys Ala Thr Gln Met Phe Phe Phe Ile Phe
100 105 110

Phe Gly Ile Thr Glu Cys Cys Leu Leu Ala Ala Met Ala Phe Asp Arg
115 120 125

Tyr Met Ala Ile Cys Ser Pro Leu His Tyr Ala Thr Arg Met Ser Arg
130 135 140

Gly Val Cys Ala His Leu Ala Ile Val Ser Trp Gly Met Gly Cys Ile
145 150 155 160

Val Gly Leu Gly Gln Thr Asn Phe Ile Phe Ser Leu Asn Phe Cys Gly
165 170 175

Pro Cys Glu Ile Asp His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala
180 185 190

Leu Ala Cys Gly Asp Thr Ser Gln Asn Glu Ala Ala Ile Phe Val Ala
195 200 205

Ala Val Leu Cys Ile Phe Ser Pro Phe Leu Leu Ile Ile Ser Ser Tyr
210 215 220

Val Arg Ile Leu Ile Ala Val Leu Val Met Pro Ser Arg Glu Gly Arg
225 230 235 240

His Lys Ala Leu Ser Thr Cys Ser Ser His Leu Leu Val Val Thr Leu
245 250 255

Phe Tyr Gly Ser Thr Ser Ala Thr Tyr Leu Arg Pro Lys Ser Asp His
260 265 270

Ser Pro Glu Val Asp Lys Leu Leu Ala Leu Phe Tyr Thr Ala Val Thr
275 280 285

Ser Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys
290 295 300

Ala Ala Leu Arg Lys Thr Leu Ser Leu Lys Lys Val Leu Ile Met Asn
305 310 315 320

Arg

<210> 53
<211> 957
<212> DNA
<213> Homo sapiens

<400> 53
acacttcatt tacatggaac cagaaaacca cacagggatt ccagaatttt acctgttggg 60
actttcagag aatccagaga ttcagtccgt tctctttggg ctgttcttgt ctttgtactt 120
ggtgaccgtc tttgggaacc tgctcatcat cctggccatt gtctctgacc ctaagcttca 180
cacaccaatg tatttattcc tctctaacct atccttctct gacatctgct tcacctctac 240
cactgtccca aagatgctgc tgggcatcca gactcagagt aagctcatca cctatgcagg 300
ctgcatcaca cagatgtact tcttcacagt cttcggactt ctggacaatc tgcttctgac 360
tgtgatggca tatgaccgct ttgtggccat ctgccacccc ttgcactata cagtgctcat 420
gaaccctaag ctctgttccc agctacttct cctggcatgg cttataagca tacttggagc 480
cctgcctgag agtttaactg cactgagact gtctttctgt gcagtcgtgg aaattccaca 540
ctatttttgt gaactccctg aagtccttaa gctagcctgc tctgacacct tcatcaataa 600
cgttgtgtta tatattgtaa caggcatcat gggctttttt cctcttgctg ggatactttt 660
ctcttactct caaattgtga catctgtctt gcggatttca acagtgggag gaaagtataa 720
agcgttttcc acctgtggtt ctcatctctc agttgtgtct ctgttctatg gaacctgcct 780
gggggtgtac ctcagttcta tctggacaca ggcttcttgg gcaggggtgt ttgcttctgt 840
tctgtacact gtggtcactc ccatgatgaa ccctttcatc tatagcctga ggaacaggga 900
catgaagaga gccctgaata cactactatg tagtgtgcca tcctcatctt gaaagta 957

<210> 54

<211> 312
<212> PRT
<213> Homo sapiens

<400> 54

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Met Glu Pro Glu Asn His Thr Gly Ile Pro Glu Phe Tyr Leu Leu Gly
 1               5                  10                  15

Leu Ser Glu Asn Pro Glu Ile Gln Ser Val Leu Phe Gly Leu Phe Leu
            20                  25                  30

Ser Leu Tyr Leu Val Thr Val Phe Gly Asn Leu Leu Ile Ile Leu Ala
        35                  40                  45

Ile Val Ser Asp Pro Lys Leu His Thr Pro Met Tyr Leu Phe Leu Ser
    50                  55                  60

Asn Leu Ser Phe Ser Asp Ile Cys Phe Thr Ser Thr Thr Val Pro Lys
65                  70                  75                  80

Met Leu Leu Gly Ile Gln Thr Gln Ser Lys Leu Ile Thr Tyr Ala Gly
                85                  90                  95

Cys Ile Thr Gln Met Tyr Phe Phe Thr Val Phe Gly Leu Leu Asp Asn
            100                 105                 110

Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys His
        115                 120                 125

Pro Leu His Tyr Thr Val Leu Met Asn Pro Lys Leu Cys Ser Gln Leu
    130                 135                 140

Leu Leu Leu Ala Trp Leu Ile Ser Ile Leu Gly Ala Leu Pro Glu Ser
145                 150                 155                 160

Leu Thr Ala Leu Arg Leu Ser Phe Cys Ala Val Val Glu Ile Pro His
                165                 170                 175

Tyr Phe Cys Glu Leu Pro Glu Val Leu Lys Leu Ala Cys Ser Asp Thr
            180                 185                 190

Phe Ile Asn Asn Val Val Leu Tyr Ile Val Thr Gly Ile Met Gly Phe
        195                 200                 205

Phe Pro Leu Ala Gly Ile Leu Phe Ser Tyr Ser Gln Ile Val Thr Ser
    210                 215                 220

Val Leu Arg Ile Ser Thr Val Gly Gly Lys Tyr Lys Ala Phe Ser Thr
```

225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Cys Leu
245 250 255

Gly Val Tyr Leu Ser Ser Ile Trp Thr Gln Ala Ser Trp Ala Gly Val
260 265 270

Phe Ala Ser Val Leu Tyr Thr Val Val Thr Pro Met Met Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Arg Ala Leu Asn Thr Leu
290 295 300

Leu Cys Ser Val Pro Ser Ser Ser
305 310

<210> 55
<211> 996
<212> DNA
<213> Homo sapiens

<400> 55
ctgcctttca tggagataaa aaactgctca gtggtgactg agttcatcct cctggggatc 60
ccacacacag agggctttga gactctgctt tttgtgttat tcctgccctt ctatgcctgt 120
accctagtgg gaaatgtatc tatccttgtg gctgttattt cctcaactcg ccttcataca 180
cccatgtatt ttttcctggg gaacttgtcc gtatttgata tgggtttctc ttctgtgacc 240
tgtccaaaaa tgctctttta ccttatggga cttagcagac ttatctccta ccaagactgt 300
gtctcccagc tcttcttctt tcattttctt gggagcattg agtgctttct gtatacagtg 360
atggcctatg accgctttgc tgccatttgt caccctcttc ggtactcggt catcatgaac 420
tctaagatct gtgtggctct agctgtgggc acatggctat taggatgttt ccactccagc 480
gtcttaactt ccctcacctt cactttgcct tactgtggtc ccaatgaagt agaccacttc 540
ttctgtgaca taccagccat cttgccattg gcgtctgctg atacctcctt agcacagaga 600
gtgagcttca ctaatgttgg tctagtgtcc cttgtctgct ttctcctgat ccttctgtcc 660
tatacacgaa tcacaatctc catcttgagt attcagtcaa ctgaggggcg tcagcgtgcc 720
ttctccacct gcagtgccca cctcattgct atcctctgtg cctatggacc tataatcact 780
atatacctac agcctacacc aaaccccatg ctgggaactg tcgtgcaaat tctgatgaac 840
ttggtaggtc caatgctgaa ccctttgatc tatactttga ggaataagga agtaaagata 900
gccctgaaaa agatactgca tgggaagggg tcagtttctg agggttagga agaatccatc 960
atcatcatca tcatcatcat atcatcaaaa tcactt 996

<210> 56
<211> 312
<212> PRT
<213> Homo sapiens

<400> 56

```
Met Glu Ile Lys Asn Cys Ser Val Val Thr Glu Phe Ile Leu Leu Gly
 1               5                  10                  15

Ile Pro His Thr Glu Gly Phe Glu Thr Leu Leu Phe Val Leu Phe Leu
            20                  25                  30

Pro Phe Tyr Ala Cys Thr Leu Val Gly Asn Val Ser Ile Leu Val Ala
        35                  40                  45

Val Ile Ser Ser Thr Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
    50                  55                  60

Asn Leu Ser Val Phe Asp Met Gly Phe Ser Ser Val Thr Cys Pro Lys
65                  70                  75                  80

Met Leu Phe Tyr Leu Met Gly Leu Ser Arg Leu Ile Ser Tyr Gln Asp
                85                  90                  95

Cys Val Ser Gln Leu Phe Phe Phe His Phe Leu Gly Ser Ile Glu Cys
            100                 105                 110

Phe Leu Tyr Thr Val Met Ala Tyr Asp Arg Phe Ala Ala Ile Cys His
        115                 120                 125

Pro Leu Arg Tyr Ser Val Ile Met Asn Ser Lys Ile Cys Val Ala Leu
    130                 135                 140

Ala Val Gly Thr Trp Leu Leu Gly Cys Phe His Ser Ser Val Leu Thr
145                 150                 155                 160

Ser Leu Thr Phe Thr Leu Pro Tyr Cys Gly Pro Asn Glu Val Asp His
                165                 170                 175

Phe Phe Cys Asp Ile Pro Ala Ile Leu Pro Leu Ala Ser Ala Asp Thr
            180                 185                 190

Ser Leu Ala Gln Arg Val Ser Phe Thr Asn Val Gly Leu Val Ser Leu
        195                 200                 205

Val Cys Phe Leu Leu Ile Leu Leu Ser Tyr Thr Arg Ile Thr Ile Ser
    210                 215                 220

Ile Leu Ser Ile Gln Ser Thr Glu Gly Arg Gln Arg Ala Phe Ser Thr
225                 230                 235                 240

Cys Ser Ala His Leu Ile Ala Ile Leu Cys Ala Tyr Gly Pro Ile Ile
                245                 250                 255
```

```
Thr Ile Tyr Leu Gln Pro Thr Pro Asn Pro Met Leu Gly Thr Val Val
            260                 265                 270

Gln Ile Leu Met Asn Leu Val Gly Pro Met Leu Asn Pro Leu Ile Tyr
        275                 280                 285

Thr Leu Arg Asn Lys Glu Val Lys Ile Ala Leu Lys Lys Ile Leu His
    290                 295                 300

Gly Lys Gly Ser Val Ser Glu Gly
305                 310
```

<210> 57
<211> 975
<212> DNA
<213> Homo sapiens

<400> 57

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gtgggaaaat atggactatt tgaacaccag ttcagaggag ggcttcattt tggtgggctt 60
ctcagactgg cctcacctag aaccaaccct ttttgctttc atttctattt tctactctct 120
gactctcttt ggcaacaccg tgatcatcat tctgtctcga ctggacctcc gcctgcacac 180
actcatgtac tacttcctct gccacctctc cttcctggac ctctgctaca ccgccagcac 240
tgtgccccag cttctggtca acctctctgg acttgacagg accatcagct ttggaaggtg 300
tgtggcccag ctctgcatag tgctctcact gggggggaact gagtgtgtgc ttttggtgac 360
aatggctata gatcgctatg ctgctgtgtg tcgcccactc cactacacaa ccattatgca 420
ccctgttctc tgcagagcat tggttgtatt ctcctgggtg gggggccttg tgaactctct 480
gatccagaca agccttgtga tggccatgcc tctgtgtgga caccaactga atcacttctt 540
ctgtgagcta cctgttctcc tgaagatggc ctgtgaggac acaggaggca cagaggtcaa 600
tttgtttgtg gcccgggtca taatcttagt gtgtccttta ctgctaattc taggctccta 660
tgctcacatt gccagggcag tgctgaacat caggtcagtg gctggtcgca gaaaggcttt 720
tgggacatgt gcatctcatc tcattgtggt tgccatgttc tatggctcag ccatctccac 780
atacctccaa cctgtccaca ggtattctga gaaggaggga aaatttcttg ccctttttta 840
tactgtaatc acccccatgc tcaaccctct gatctatacg ctgaggaaca aggatgtgaa 900
aggagcgctg tggaaggtgc tagggagagg cacagactcc aggtaggaga gcaaacaaga 960
gcagaaaatt attta                                                  975
```

<210> 58
<211> 311
<212> PRT
<213> Homo sapiens

<400> 58

```
Met Asp Tyr Leu Asn Thr Ser Ser Glu Glu Gly Phe Ile Leu Val Gly
  1               5                  10                  15
```

Phe Ser Asp Trp Pro His Leu Glu Pro Thr Leu Phe Ala Phe Ile Ser
20 25 30

Ile Phe Tyr Ser Leu Thr Leu Phe Gly Asn Thr Val Ile Ile Ile Leu
35 40 45

Ser Arg Leu Asp Leu Arg Leu His Thr Leu Met Tyr Tyr Phe Leu Cys
50 55 60

His Leu Ser Phe Leu Asp Leu Cys Tyr Thr Ala Ser Thr Val Pro Gln
65 70 75 80

Leu Leu Val Asn Leu Ser Gly Leu Asp Arg Thr Ile Ser Phe Gly Arg
85 90 95

Cys Val Ala Gln Leu Cys Ile Val Leu Ser Leu Gly Gly Thr Glu Cys
100 105 110

Val Leu Leu Val Thr Met Ala Ile Asp Arg Tyr Ala Ala Val Cys Arg
115 120 125

Pro Leu His Tyr Thr Thr Ile Met His Pro Val Leu Cys Arg Ala Leu
130 135 140

Val Val Phe Ser Trp Val Gly Gly Leu Val Asn Ser Leu Ile Gln Thr
145 150 155 160

Ser Leu Val Met Ala Met Pro Leu Cys Gly His Gln Leu Asn His Phe
165 170 175

Phe Cys Glu Leu Pro Val Leu Leu Lys Met Ala Cys Glu Asp Thr Gly
180 185 190

Gly Thr Glu Val Asn Leu Phe Val Ala Arg Val Ile Ile Leu Val Cys
195 200 205

Pro Leu Leu Leu Ile Leu Gly Ser Tyr Ala His Ile Ala Arg Ala Val
210 215 220

Leu Asn Ile Arg Ser Val Ala Gly Arg Arg Lys Ala Phe Gly Thr Cys
225 230 235 240

Ala Ser His Leu Ile Val Val Ala Met Phe Tyr Gly Ser Ala Ile Ser
245 250 255

Thr Tyr Leu Gln Pro Val His Arg Tyr Ser Glu Lys Glu Gly Lys Phe
260 265 270

```
Leu Ala Leu Phe Tyr Thr Val Ile Thr Pro Met Leu Asn Pro Leu Ile
        275                 280                 285

Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Trp Lys Val Leu
    290                 295                 300

Gly Arg Gly Thr Asp Ser Arg
305                 310
```

<210> 59
<211> 961
<212> DNA
<213> Homo sapiens

<400> 59

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actatggaaa atttgaacac cagttcagaa gagggcttca ttttggtggt cttctcagac 60
tggcctcacc tagaacccat ccttttttgct ttcatttcta ttttctactc tctgactctc 120
tttggcaaca ccgtgatcat cattctgtct caactggacc tctgcctgca cacacccatg 180
tactactttc tctgccacct ctccttcctg gacctctgct acactgccag cactgtgccc 240
cagcttctgg tcaacctctc tggacttgac aggaccatca gctttggaag gtgtgtggcc 300
cagctctgca tagtgctctc actgggagga actgagtgtg tgcttttggt ggcaatggct 360
atagatcgct atgctgctgt gtgtcgccca ctccactaca caaccattat gcaccctgtt 420
ctctgcagag cattggttgt attctcctgg gtagggggcc ttgtgaactc tctgatccag 480
acaagccttg tgatggccat gcctctgtgt ggacaccaac tgaatcactt cttctgtgag 540
ctacctgttc tcctgaagat ggcctgtgag gacacaggag gcacagaggt caatttgttt 600
gtggcccggg tcataatctt agtgtgtcct ttactgctaa ttctaggctc ctatgctcac 660
attgccaggg cagtgctgaa catcaggtca atggctggtc gcagaaaggc ttttgggacg 720
tgtgcatctc atctcattgt ggttgccatg ttttatggct caggtatctc cacatacctc 780
caacctgtcc acaggtattc tgagaaggag gggaaatttc ttgccctttt ttatactatc 840
atcaccccca tgctcaaccc tctgatctat acgctgagga acaaggatgt gaaaggagcg 900
ctgtggaagg tgctaggcag gagcacagac tcagcataga agggggaaag ggagcaataa 960
a                                                                   961
```

<210> 60
<211> 311
<212> PRT
<213> Homo sapiens

<400> 60

```
Met Glu Asn Leu Asn Thr Ser Ser Glu Glu Gly Phe Ile Leu Val Val
  1               5                  10                  15

Phe Ser Asp Trp Pro His Leu Glu Pro Ile Leu Phe Ala Phe Ile Ser
            20                  25                  30

Ile Phe Tyr Ser Leu Thr Leu Phe Gly Asn Thr Val Ile Ile Ile Leu
```

```
         35                  40                  45

Ser Gln Leu Asp Leu Cys Leu His Thr Pro Met Tyr Tyr Phe Leu Cys
     50                  55                  60

His Leu Ser Phe Leu Asp Leu Cys Tyr Thr Ala Ser Thr Val Pro Gln
 65                  70                  75                  80

Leu Leu Val Asn Leu Ser Gly Leu Asp Arg Thr Ile Ser Phe Gly Arg
                 85                  90                  95

Cys Val Ala Gln Leu Cys Ile Val Leu Ser Leu Gly Gly Thr Glu Cys
            100                 105                 110

Val Leu Leu Val Ala Met Ala Ile Asp Arg Tyr Ala Ala Val Cys Arg
        115                 120                 125

Pro Leu His Tyr Thr Thr Ile Met His Pro Val Leu Cys Arg Ala Leu
    130                 135                 140

Val Val Phe Ser Trp Val Gly Gly Leu Val Asn Ser Leu Ile Gln Thr
145                 150                 155                 160

Ser Leu Val Met Ala Met Pro Leu Cys Gly His Gln Leu Asn His Phe
                165                 170                 175

Phe Cys Glu Leu Pro Val Leu Leu Lys Met Ala Cys Glu Asp Thr Gly
            180                 185                 190

Gly Thr Glu Val Asn Leu Phe Val Ala Arg Val Ile Ile Leu Val Cys
        195                 200                 205

Pro Leu Leu Leu Ile Leu Gly Ser Tyr Ala His Ile Ala Arg Ala Val
    210                 215                 220

Leu Asn Ile Arg Ser Met Ala Gly Arg Arg Lys Ala Phe Gly Thr Cys
225                 230                 235                 240

Ala Ser His Leu Ile Val Val Ala Met Phe Tyr Gly Ser Gly Ile Ser
                245                 250                 255

Thr Tyr Leu Gln Pro Val His Arg Tyr Ser Glu Lys Glu Gly Lys Phe
            260                 265                 270

Leu Ala Leu Phe Tyr Thr Ile Ile Thr Pro Met Leu Asn Pro Leu Ile
        275                 280                 285

Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Trp Lys Val Leu
```

290 295 300

Gly Arg Ser Thr Asp Ser Ala
305 310

<210> 61
<211> 1013
<212> DNA
<213> Homo sapiens

<400> 61
ctgttaccac aaatttattt gcaaaatgac tccaagaaac atgacaacag tgagtggatt 60
cctcctcatg gggttctctg acaaccatga gctgcagatc ttacaggctt tgctcttctt 120
ggtgacatac ctattggatt cagcagggaa cttcatcatt atcaccatca caacaataga 180
caaacagctc cagtctccaa tgtattactt tctgaagcac ctttccatta tggacttctc 240
atctctctct gtcacagttc cccagtatgt tgacagttcc ctggcacgaa gtggctatat 300
ttcatatggg cagtgcatgc tgcaggtttt tttcttcaca ggtttagcct ggagtgaggt 360
ggccattctc acagtgatgt cttatgaccg ctatgtggcc atctgcctcc cactgcacta 420
tgaggtcata atgagtccca gaaagtgcac ttgggctgtg gcagctgtgt ggctaagtgg 480
aggtatctca ggaacattat tcacagcaag tacactctct atcagattct gtgggcacaa 540
aattattcac cagttcttct gtgatatccc gcaattgctc aagctctcct gctctaatga 600
tgactttgga ctactgaaag tgtctacttt cattgctgta atgggatttg cctgctttgt 660
ggggattgcc ttctcctatt gccagatatt ctctacagtt ctcaggatgc cctctgctga 720
aggccgatct aaggtcttct ccacctgcct gccccatctc ttcgttgttt catttttttct 780
ctcaacaggc atttgtgcct atctaaagcc aagctcagac tcaccaactg ctttagacct 840
catgctctct atcttttaca cagtactacc cccaaccctc aatcctgtta tctatagtct 900
aagaaatgag tccttgaaaa gagctgtaaa gaagttactt ttaagtgaag aattcattgg 960
gaaaaattat gtttgttctg tttttagtgc ctgctaagac tggacatgaa aat 1013

<210> 62
<211> 323
<212> PRT
<213> Homo sapiens

<400> 62
Met Thr Pro Arg Asn Met Thr Thr Val Ser Gly Phe Leu Leu Met Gly
1 5 10 15

Phe Ser Asp Asn His Glu Leu Gln Ile Leu Gln Ala Leu Leu Phe Leu
20 25 30

Val Thr Tyr Leu Leu Asp Ser Ala Gly Asn Phe Ile Ile Ile Thr Ile
35 40 45

Thr Thr Ile Asp Lys Gln Leu Gln Ser Pro Met Tyr Tyr Phe Leu Lys
50 55 60

His Leu Ser Ile Met Asp Phe Ser Ser Leu Ser Val Thr Val Pro Gln
65 70 75 80

Tyr Val Asp Ser Ser Leu Ala Arg Ser Gly Tyr Ile Ser Tyr Gly Gln
85 90 95

Cys Met Leu Gln Val Phe Phe Phe Thr Gly Leu Ala Trp Ser Glu Val
100 105 110

Ala Ile Leu Thr Val Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Leu
115 120 125

Pro Leu His Tyr Glu Val Ile Met Ser Pro Arg Lys Cys Thr Trp Ala
130 135 140

Val Ala Ala Val Trp Leu Ser Gly Gly Ile Ser Gly Thr Leu Phe Thr
145 150 155 160

Ala Ser Thr Leu Ser Ile Arg Phe Cys Gly His Lys Ile Ile His Gln
165 170 175

Phe Phe Cys Asp Ile Pro Gln Leu Leu Lys Leu Ser Cys Ser Asn Asp
180 185 190

Asp Phe Gly Leu Leu Lys Val Ser Thr Phe Ile Ala Val Met Gly Phe
195 200 205

Ala Cys Phe Val Gly Ile Ala Phe Ser Tyr Cys Gln Ile Phe Ser Thr
210 215 220

Val Leu Arg Met Pro Ser Ala Glu Gly Arg Ser Lys Val Phe Ser Thr
225 230 235 240

Cys Leu Pro His Leu Phe Val Val Ser Phe Phe Leu Ser Thr Gly Ile
245 250 255

Cys Ala Tyr Leu Lys Pro Ser Ser Asp Ser Pro Thr Ala Leu Asp Leu
260 265 270

Met Leu Ser Ile Phe Tyr Thr Val Leu Pro Pro Thr Leu Asn Pro Val
275 280 285

Ile Tyr Ser Leu Arg Asn Glu Ser Leu Lys Arg Ala Val Lys Lys Leu
290 295 300

Leu Leu Ser Glu Glu Phe Ile Gly Lys Asn Tyr Val Cys Ser Val Phe
305 310 315 320

Ser Ala Cys

<210> 63
<211> 947
<212> DNA
<213> Homo sapiens

<400> 63
catggaacaa ggaaatcact ccacagtgaa aaaattcttc ctctctggct taacagaaca 60
accagaacta cagctgccac tcttcctcct ctttcttgga atctacctgc tcacagtgct 120
ggggaacctg ggcatgatca tcctgatcct gctcagctca cacctgcaca cccccatgta 180
cttcttcctc agcagtctgt ccttcattga cctctgccaa tctactgtca ttaccccaaa 240
aatgctggtg aattttgtga gggagaagaa tgaaatctcc taccctgagt gcataactca 300
actttacttc tttctccttt ttgctatttc agaatgttac atgctggctg caatggcata 360
tgatcgctat gttgccatct gtagcccctt actttatagt agcattatgt cccaacataa 420
gtgcctttca attgttttag gagtttacat tataggcata gtttgtgcat cagctcatgt 480
agggtgtatg tttaggattg atttctgcag atatgatgtg atcaaccatt atttctgtga 540
ccttatttct atccttaagc tctcgtgctc tgatgctttt gttaatgagt tgatgatttt 600
aatttttagt ggagttaata ttattgcccc aacgctgacc atcctcagtt cttatgtttt 660
catcattatg agcatcttac gcattaaatc cactgagggc agatctaaaa ccttcagcac 720
ctgcagctcc cacatctcag ctgttgctgt cttttatggt tctgctgcat ttatgtatct 780
gaacccatct tcttccaatt ctatggatga aggaaaagtg tcttctatat tttacaccat 840
tattgttccc atgctcaacc ccctgatcta cagtctgagg aataaggatg tcaatattgc 900
tttgaagaaa atgatacaaa gaagataatt tttctgatga atataat 947

<210> 64
<211> 308
<212> PRT
<213> Homo sapiens

<400> 64
Met Glu Gln Gly Asn His Ser Thr Val Lys Lys Phe Phe Leu Ser Gly
1 5 10 15

Leu Thr Glu Gln Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Leu Leu Thr Val Leu Gly Asn Leu Gly Met Ile Ile Leu
35 40 45

Ile Leu Leu Ser Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys Gln Ser Thr Val Ile Thr Pro Lys

65 70 75 80

Met Leu Val Asn Phe Val Arg Glu Lys Asn Glu Ile Ser Tyr Pro Glu
85 90 95

Cys Ile Thr Gln Leu Tyr Phe Phe Leu Leu Phe Ala Ile Ser Glu Cys
100 105 110

Tyr Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser
115 120 125

Pro Leu Leu Tyr Ser Ser Ile Met Ser Gln His Lys Cys Leu Ser Ile
130 135 140

Val Leu Gly Val Tyr Ile Ile Gly Ile Val Cys Ala Ser Ala His Val
145 150 155 160

Gly Cys Met Phe Arg Ile Asp Phe Cys Arg Tyr Asp Val Ile Asn His
165 170 175

Tyr Phe Cys Asp Leu Ile Ser Ile Leu Lys Leu Ser Cys Ser Asp Ala
180 185 190

Phe Val Asn Glu Leu Met Ile Leu Ile Phe Ser Gly Val Asn Ile Ile
195 200 205

Ala Pro Thr Leu Thr Ile Leu Ser Ser Tyr Val Phe Ile Ile Met Ser
210 215 220

Ile Leu Arg Ile Lys Ser Thr Glu Gly Arg Ser Lys Thr Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Ser Ala Val Ala Val Phe Tyr Gly Ser Ala Ala
245 250 255

Phe Met Tyr Leu Asn Pro Ser Ser Ser Asn Ser Met Asp Glu Gly Lys
260 265 270

Val Ser Ser Ile Phe Tyr Thr Ile Ile Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Asn Ile Ala Leu Lys Lys Met
290 295 300

Ile Gln Arg Arg
305

<210> 65
<211> 942
<212> DNA
<213> Homo sapiens

<400> 65
gaaaaatggc tttagcaaat gtctcttcag tgaaagaatt tatcttgctg ggcttgacac 60
aacagccaga gctccagctg ccgctcttct tcttgttttt gggaatctac gtggtctctg 120
tgatggggaa cttgggcttg attgttctga ttgtgttgaa tcctcacctg cacaccccca 180
tgtactactt tctcttcaac ctttccttta cagatctctg ctactcctct gccataaccc 240
ccagaatgct ggtgggtttt gtgaagcaga atatcatctc tcatgcagag tgcttgactc 300
agctcttttt ctttgccttc tttgttattg atgaatgcta cattttgaca gcaatggctt 360
atgacagata tgctgccatt tgtaagcccc tgctttacca ggtcaccatg tctcatcagg 420
tctgcctatt gatgactatg ggtgtgtatg tgatgggctt tgctggtgcc ttgtcccaca 480
tagtttgcat gctgagactc accttctgtg atggcaacat catcaataac tacgtatgtg 540
atgtacatcc tctccttaaa ctctcctgct caagtacctc catcaatgag ctggtacttt 600
tcattgttgt tggtgtcaat ataacagtgc ccagcctgac tctctttgtt tcttatacct 660
taatcctttc caacatcctc agcatccatt ctggggaagg taggtcaaaa gccttcagta 720
cctgtggctc ccatgtgata gctgtttctt ttttctttgg agctgcagcc ttcatgtatc 780
ttaagccttc tagtgcatct gtggatgaag ataaagtatc tactatcttt tataccattc 840
tgggtccaat gctgaatcct ttcatctaca gtataaggaa taaagatgtc cacattgcac 900
tgaaaaaaac tttgaagaaa aagatactca cctaaataga at 942

<210> 66
<211> 309
<212> PRT
<213> Homo sapiens

<400> 66
Met Ala Leu Ala Asn Val Ser Ser Val Lys Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Thr Gln Gln Pro Glu Leu Gln Leu Pro Leu Phe Phe Leu Phe Leu
20 25 30

Gly Ile Tyr Val Val Ser Val Met Gly Asn Leu Gly Leu Ile Val Leu
35 40 45

Ile Val Leu Asn Pro His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
50 55 60

Asn Leu Ser Phe Thr Asp Leu Cys Tyr Ser Ser Ala Ile Thr Pro Arg
65 70 75 80

Met Leu Val Gly Phe Val Lys Gln Asn Ile Ile Ser His Ala Glu Cys
85 90 95

Leu Thr Gln Leu Phe Phe Phe Ala Phe Phe Val Ile Asp Glu Cys Tyr
100 105 110

Ile Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Lys Pro
115 120 125

Leu Leu Tyr Gln Val Thr Met Ser His Gln Val Cys Leu Leu Met Thr
130 135 140

Met Gly Val Tyr Val Met Gly Phe Ala Gly Ala Leu Ser His Ile Val
145 150 155 160

Cys Met Leu Arg Leu Thr Phe Cys Asp Gly Asn Ile Ile Asn Asn Tyr
165 170 175

Val Cys Asp Val His Pro Leu Leu Lys Leu Ser Cys Ser Ser Thr Ser
180 185 190

Ile Asn Glu Leu Val Leu Phe Ile Val Val Gly Val Asn Ile Thr Val
195 200 205

Pro Ser Leu Thr Leu Phe Val Ser Tyr Thr Leu Ile Leu Ser Asn Ile
210 215 220

Leu Ser Ile His Ser Gly Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Gly Ser His Val Ile Ala Val Ser Phe Phe Phe Gly Ala Ala Ala Phe
245 250 255

Met Tyr Leu Lys Pro Ser Ser Ala Ser Val Asp Glu Asp Lys Val Ser
260 265 270

Thr Ile Phe Tyr Thr Ile Leu Gly Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Ile Arg Asn Lys Asp Val His Ile Ala Leu Lys Lys Thr Leu Lys
290 295 300

Lys Lys Ile Leu Thr
305

<210> 67
<211> 934
<212> DNA
<213> Homo sapiens

<400> 67
ggaaatggct ttaagaaatg cctcttcagt gaaagaattt atcttgctgg gattgacaca 60
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gttggggaac ctgggcttga ttgttctgat tgtgttgaat cctcacctgc acacccccat 180
gtactacttt ctcttcaacc tttccttcat agatctctgc tactcctctg tcataacccc 240
tagaatgttg gtgggttttg tgaagcagaa catcatctct catgctgagt gcttgactca 300
gctttttttc tttgccttct ttgttattga tgaatgctac attttgacag caatggctta 360
tgacagatat gctgccattt gtaagcccct gctttaccag gtcaccatgt ctcatcaggt 420
ctgcctattg atgactatgg gtgtgtatgt gatgggcttt gcaggtgcct tgtcccacat 480
agtttgcatg ctgagactca ccttctgtga tggtaacatc attaatcact atgtttgtga 540
tgtacttcct ctccttaaac tctcctgcac aagtacctcc atcaatgaga tggtagtttt 600
tattgttgtg ggtgtcaatg tgatagtgcc cagcctgact ctctttgttt cttatacctt 660
aatcctttcc aacatcctca gcatccattc tgcagaaggt agatcaaaag ccttcagtac 720
ctgtggctcc catgtgatgg ctgtttcttt tttctttgga gctgcagcct tcatgtatct 780
taagccttct agtgcatctg tggatgaaga gaaattatct accatctttt ataccatttt 840
gggtccaatg ctgaatcctt tcatctacag tataaggaat aaggatgtcc atcttgcact 900
gagaaaaaca ttgatgaaac tgaggttttc ctaa 934

<210> 68
<211> 309
<212> PRT
<213> Homo sapiens

<400> 68
Met Ala Leu Arg Asn Ala Ser Ser Val Lys Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Thr Gln Gln Pro Gly Leu Gln Leu Pro Leu Phe Phe Leu Phe Leu
20 25 30

Gly Ile Tyr Val Val Ser Met Leu Gly Asn Leu Gly Leu Ile Val Leu
35 40 45

Ile Val Leu Asn Pro His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
50 55 60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Arg
65 70 75 80

Met Leu Val Gly Phe Val Lys Gln Asn Ile Ile Ser His Ala Glu Cys
85 90 95

Leu Thr Gln Leu Phe Phe Phe Ala Phe Phe Val Ile Asp Glu Cys Tyr
100 105 110

Ile Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Lys Pro
115 120 125

Leu Leu Tyr Gln Val Thr Met Ser His Gln Val Cys Leu Leu Met Thr
130 135 140

Met Gly Val Tyr Val Met Gly Phe Ala Gly Ala Leu Ser His Ile Val
145 150 155 160

Cys Met Leu Arg Leu Thr Phe Cys Asp Gly Asn Ile Ile Asn His Tyr
165 170 175

Val Cys Asp Val Leu Pro Leu Leu Lys Leu Ser Cys Thr Ser Thr Ser
180 185 190

Ile Asn Glu Met Val Val Phe Ile Val Val Gly Val Asn Val Ile Val
195 200 205

Pro Ser Leu Thr Leu Phe Val Ser Tyr Thr Leu Ile Leu Ser Asn Ile
210 215 220

Leu Ser Ile His Ser Ala Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Gly Ser His Val Met Ala Val Ser Phe Phe Phe Gly Ala Ala Ala Phe
245 250 255

Met Tyr Leu Lys Pro Ser Ser Ala Ser Val Asp Glu Glu Lys Leu Ser
260 265 270

Thr Ile Phe Tyr Thr Ile Leu Gly Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Ile Arg Asn Lys Asp Val His Leu Ala Leu Arg Lys Thr Leu Met
290 295 300

Lys Leu Arg Phe Ser
305

<210> 69
<211> 940
<212> DNA
<213> Homo sapiens

<400> 69
aatggcttta ggaaatgact cttcagtgaa agaatttatc ctgcttggct tgacacagca 60
gccagagctc caactgcctc tcttcttctt cttcttggga gtctatatat tctccgtggt 120
ggggaacctg ggcttgattg ttctgattgt gttgaatcct cacctgcaaa cccctatgta 180
ctactttctc tttaaccttt cctttacaga tctctgctac tcttctgtca taaccccaa 240

aatgctggtg agttttgtga agcagaatat catttctcat gctgagtgca tgactcaact 300
ctttttcttc tgcttctttg ttattgatga atgctacatt ttgacagcaa tggcttatga 360
cagatatgct gccatctgta agcccctgct ttaccaggtc accatgtccc atcgggtctg 420
cctcttgatg acagttgggg tgtatgttat ggggtttgtg gaagctatgg cgcatactgc 480
cagtatggta cacctgatct tctgtgatag caacatcatc aatcactaca tgtgtgaaat 540
aaatgctctt ctaaagctct cctgcacaag cacttccatc aatgagctgg tggtttacat 600
tgttgtaggt tttaatgtaa tagtgcccac tctgactatc tttattactt acacgttgat 660
ccttttcaac atcctcagca tccattctgc agaaggtagg tcaaaagcct tcagcacctg 720
tggctcccat atgatagctg tttctctttt ctttggagct gcagcattca tgtatcttaa 780
gccttctagt gcatcagagg atgaagataa agtatctacc atttttttata ccattatggg 840
cccaatgttg aatcctttca tctacagtat aaggaataag gatgtccata tcgcccttaa 900
aaaaactttg aagagaagca tttttattta agtagaatct 940

<210> 70
<211> 309
<212> PRT
<213> Homo sapiens

<400> 70
Met Ala Leu Gly Asn Asp Ser Ser Val Lys Glu Phe Ile Leu Leu Gly
1 5 10 15

Leu Thr Gln Gln Pro Glu Leu Gln Leu Pro Leu Phe Phe Phe Phe Leu
20 25 30

Gly Val Tyr Ile Phe Ser Val Val Gly Asn Leu Gly Leu Ile Val Leu
35 40 45

Ile Val Leu Asn Pro His Leu Gln Thr Pro Met Tyr Tyr Phe Leu Phe
50 55 60

Asn Leu Ser Phe Thr Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys
65 70 75 80

Met Leu Val Ser Phe Val Lys Gln Asn Ile Ile Ser His Ala Glu Cys
85 90 95

Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Ile Asp Glu Cys Tyr
100 105 110

Ile Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Lys Pro
115 120 125

Leu Leu Tyr Gln Val Thr Met Ser His Arg Val Cys Leu Leu Met Thr
130 135 140

Val Gly Val Tyr Val Met Gly Phe Val Glu Ala Met Ala His Thr Ala

145 150 155 160

Ser Met Val His Leu Ile Phe Cys Asp Ser Asn Ile Ile Asn His Tyr
165 170 175

Met Cys Glu Ile Asn Ala Leu Leu Lys Leu Ser Cys Thr Ser Thr Ser
180 185 190

Ile Asn Glu Leu Val Val Tyr Ile Val Val Gly Phe Asn Val Ile Val
195 200 205

Pro Thr Leu Thr Ile Phe Ile Thr Tyr Thr Leu Ile Leu Phe Asn Ile
210 215 220

Leu Ser Ile His Ser Ala Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Gly Ser His Met Ile Ala Val Ser Leu Phe Phe Gly Ala Ala Ala Phe
245 250 255

Met Tyr Leu Lys Pro Ser Ser Ala Ser Glu Asp Glu Asp Lys Val Ser
260 265 270

Thr Ile Phe Tyr Thr Ile Met Gly Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Ile Arg Asn Lys Asp Val His Ile Ala Leu Lys Lys Thr Leu Lys
290 295 300

Arg Ser Ile Phe Ile
305

<210> 71
<211> 1010
<212> DNA
<213> Homo sapiens

<400> 71
aatgataaag aacaaccaaa ctgtcatctc ccagtttctt ctcctgggcc tgcccatccc 60
cccagagcac cagcacctgt tctatgccct gttcctggcc atgtacctca ccaccgccct 120
ggggaacctc atcatcatca tcctcataat actggacttc catctccaca cacccatata 180
cttgtttctc agcaacttgt cattctctga tctctgtttt tcctctgtca caatgcccaa 240
gttgctgcag aacatgcaaa gccaggacac aaccatctcc tatgtaggtt gtctgacaca 300
aatgtacttt ccaaatgttt ttgcaaacct agagaacttt cttcttatgt tcatggccta 360
tgaccgctat gtggccatat gttaccctct tcgttatacc agcatcatga gtcccattct 420
ctgtgtttgt atggtgttta tgtcctggtt acttaccatg ctgaattcca cattgcacac 480
tgtacttatt gttaaattat cattctgtga ggacaatgtg atcccccact ttttctgtga 540

catatctgcc gttctcaagt tggcctgctc tgacatttat attaatgagc taacgatatt 600
tatcacggga gcattcatta ttgtcatccc attcttactc attgttgtgt cctatgtaca 660
aattgtctgc tccattctaa agttttcatc tacacgggga atagccaaga tcttttccac 720
ctgtggctcc cacctgtctg tggtctcact gttctatggg acaattattg gtctctactt 780
atgcccatca actaataact ctactgtgaa ggacactgcc atggctatga tgtacacagt 840
ggtgactccc atgctgaatc ccttcatcta cagcctgagg aacaaagata tgaaagaggc 900
cctgattaga gtcctttgca agaaggaaat atctttataa tggcaatact tgcatttaga 960
ctcaaattta tctcacaatt atattgatat taatatcaca caatatatcc 1010

<210> 72
<211> 312
<212> PRT
<213> Homo sapiens

<400> 72
Met Ile Lys Asn Asn Gln Thr Val Ile Ser Gln Phe Leu Leu Leu Gly
1 5 10 15

Leu Pro Ile Pro Pro Glu His Gln His Leu Phe Tyr Ala Leu Phe Leu
20 25 30

Ala Met Tyr Leu Thr Thr Ala Leu Gly Asn Leu Ile Ile Ile Ile Leu
35 40 45

Ile Ile Leu Asp Phe His Leu His Thr Pro Ile Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Asp Thr Thr Ile Ser Tyr Val Gly
85 90 95

Cys Leu Thr Gln Met Tyr Phe Pro Asn Val Phe Ala Asn Leu Glu Asn
100 105 110

Phe Leu Leu Met Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Tyr
115 120 125

Pro Leu Arg Tyr Thr Ser Ile Met Ser Pro Ile Leu Cys Val Cys Met
130 135 140

Val Phe Met Ser Trp Leu Leu Thr Met Leu Asn Ser Thr Leu His Thr
145 150 155 160

Val Leu Ile Val Lys Leu Ser Phe Cys Glu Asp Asn Val Ile Pro His
165 170 175

Phe Phe Cys Asp Ile Ser Ala Val Leu Lys Leu Ala Cys Ser Asp Ile
180 185 190

Tyr Ile Asn Glu Leu Thr Ile Phe Ile Thr Gly Ala Phe Ile Ile Val
195 200 205

Ile Pro Phe Leu Leu Ile Val Val Ser Tyr Val Gln Ile Val Cys Ser
210 215 220

Ile Leu Lys Phe Ser Ser Thr Arg Gly Ile Ala Lys Ile Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile
245 250 255

Gly Leu Tyr Leu Cys Pro Ser Thr Asn Asn Ser Thr Val Lys Asp Thr
260 265 270

Ala Met Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Glu Ala Leu Ile Arg Val
290 295 300

Leu Cys Lys Lys Glu Ile Ser Leu
305 310

<210> 73
<211> 941
<212> DNA
<213> Homo sapiens

<400> 73
aatggactgg gaaaattgct cctcattaac tgatttttt ctcttgggaa ttaccaataa 60
cccagagatg aaagtgaccc tatttgctgt attcttggct gtttatatca ttaatttctc 120
agcaaatctt ggaatgatag ttttaatcag aatggattac caacttcaca caccaatgta 180
tttcttcctc agtcatctgt ctttctgtga tctctgctat tctactgcaa ctgggcccaa 240
gatgctggta gatctacttg ccaagaacaa gtcaataccc ttctatggct gtgctctgca 300
attcttggtc ttctgtatct ttgcagattc tgagtgtcta ctgctgtcag tgatggcctt 360
tgatcggtac aaggccatca tcaaccccct gctctataca gtcaacatgt ctagcagagt 420
gtgctatcta ctcttgactg gggtttatct ggtgggaata gcagatgctt tgatacatat 480
gacactggcc ttccgcctat gcttctgtgg gtctaatgag attaatcatt tcttctgtga 540
tatccctcct ctcttattac tctctcgctc agatacacag gtcaatgagt tagtgttatt 600
caccgtcttt ggttttattg aactgagtac catttcagga gttttcattt cttattgtta 660
tatcatccta tcagtcttgg agatacactc tgctgagggg aggttcaaag ctctctctac 720
atgcacttcc cacttatctg cggttgcaat tttccaggga actctgctct ttatgtattt 780

ccggccaagt tcttcctatt ctctagatca agataaaatg acctcattgt tttacaccct 840
tgtggttccc atgttgaacc ccctgattta tagcctgagg aacaaggatg tgaaagaggc 900
cctgaaaaaa ctgaaaaata aaattttatt ttaaggaaat a 941

<210> 74
<211> 310
<212> PRT
<213> Homo sapiens

<400> 74
Met Asp Trp Glu Asn Cys Ser Ser Leu Thr Asp Phe Phe Leu Leu Gly
1 5 10 15

Ile Thr Asn Asn Pro Glu Met Lys Val Thr Leu Phe Ala Val Phe Leu
20 25 30

Ala Val Tyr Ile Ile Asn Phe Ser Ala Asn Leu Gly Met Ile Val Leu
35 40 45

Ile Arg Met Asp Tyr Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

His Leu Ser Phe Cys Asp Leu Cys Tyr Ser Thr Ala Thr Gly Pro Lys
65 70 75 80

Met Leu Val Asp Leu Leu Ala Lys Asn Lys Ser Ile Pro Phe Tyr Gly
85 90 95

Cys Ala Leu Gln Phe Leu Val Phe Cys Ile Phe Ala Asp Ser Glu Cys
100 105 110

Leu Leu Leu Ser Val Met Ala Phe Asp Arg Tyr Lys Ala Ile Ile Asn
115 120 125

Pro Leu Leu Tyr Thr Val Asn Met Ser Ser Arg Val Cys Tyr Leu Leu
130 135 140

Leu Thr Gly Val Tyr Leu Val Gly Ile Ala Asp Ala Leu Ile His Met
145 150 155 160

Thr Leu Ala Phe Arg Leu Cys Phe Cys Gly Ser Asn Glu Ile Asn His
165 170 175

Phe Phe Cys Asp Ile Pro Pro Leu Leu Leu Leu Ser Arg Ser Asp Thr
180 185 190

Gln Val Asn Glu Leu Val Leu Phe Thr Val Phe Gly Phe Ile Glu Leu

195 200 205

Ser Thr Ile Ser Gly Val Phe Ile Ser Tyr Cys Tyr Ile Ile Leu Ser
210 215 220

Val Leu Glu Ile His Ser Ala Glu Gly Arg Phe Lys Ala Leu Ser Thr
225 230 235 240

Cys Thr Ser His Leu Ser Ala Val Ala Ile Phe Gln Gly Thr Leu Leu
245 250 255

Phe Met Tyr Phe Arg Pro Ser Ser Ser Tyr Ser Leu Asp Gln Asp Lys
260 265 270

Met Thr Ser Leu Phe Tyr Thr Leu Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu
290 295 300

Lys Asn Lys Ile Leu Phe
305 310

<210> 75
<211> 941
<212> DNA
<213> Homo sapiens

<400> 75
aatggactgg gaaaattgct cctcattaac tgatttttt ctcttgggaa ttaccaataa 60
cccagagatg aaagtgaccc tatttgctgt attcttggct gtttatatca ttaatttctc 120
agcaaatctt ggaatgatag ctttaatcag aatggattac caacttcaca caccaatgta 180
tttcttcctc agtcatctgt ctttctgtga tctctgctat tctactgcaa ctgggcccaa 240
gatgctggta gatctacttg ccaagaacaa gtcaataccc ttctatggct gtgctctgca 300
attcttggtc ttctgtatct ttgcagattc tgagtgtcta ctgctgtcag tgatggcctt 360
tgatcggtac aaggccatca tcaacccccc gctctataca gtcaacatgt ctagcagagt 420
gtgctatcta ctcttgactg gggtttatct ggtgggaata gcagatgctt tgatacatat 480
gacactggcc ctccgcctat gcttctgtgg gtctaatgag attaatcatt tcttctgtga 540
tatccctcct ctcttattac tctcttgctc agatacacag gtcaatgagt tagtgttatt 600
caccgtcttt ggttttattg aactgagtac catttcagga gttttcattt cttattgtta 660
tatcatccta tcagtcttgg agatacactc tgctgagggg aggttcaaag ctctctctac 720
atgtacttcc cacttatctg cggttgcaat tttccaggga actctgctct ttatgtattt 780
ccggccaagt tcttcctatt ctctagatca agataaaatg acctcattgt tttacaccct 840
tgtggttccc atgttgaacc ccctgattta tagcctgagg aacaaggatg tgaaagaggc 900
cctgaaaaaa ctgaaaaata aaattttatt ttaaggaaat a 941

<210> 76
<211> 310
<212> PRT
<213> Homo sapiens

<400> 76
Met Asp Trp Glu Asn Cys Ser Ser Leu Thr Asp Phe Phe Leu Leu Gly
1 5 10 15

Ile Thr Asn Asn Pro Glu Met Lys Val Thr Leu Phe Ala Val Phe Leu
20 25 30

Ala Val Tyr Ile Ile Asn Phe Ser Ala Asn Leu Gly Met Ile Ala Leu
35 40 45

Ile Arg Met Asp Tyr Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

His Leu Ser Phe Cys Asp Leu Cys Tyr Ser Thr Ala Thr Gly Pro Lys
65 70 75 80

Met Leu Val Asp Leu Leu Ala Lys Asn Lys Ser Ile Pro Phe Tyr Gly
85 90 95

Cys Ala Leu Gln Phe Leu Val Phe Cys Ile Phe Ala Asp Ser Glu Cys
100 105 110

Leu Leu Leu Ser Val Met Ala Phe Asp Arg Tyr Lys Ala Ile Ile Asn
115 120 125

Pro Leu Leu Tyr Thr Val Asn Met Ser Ser Arg Val Cys Tyr Leu Leu
130 135 140

Leu Thr Gly Val Tyr Leu Val Gly Ile Ala Asp Ala Leu Ile His Met
145 150 155 160

Thr Leu Ala Leu Arg Leu Cys Phe Cys Gly Ser Asn Glu Ile Asn His
165 170 175

Phe Phe Cys Asp Ile Pro Pro Leu Leu Leu Leu Ser Cys Ser Asp Thr
180 185 190

Gln Val Asn Glu Leu Val Leu Phe Thr Val Phe Gly Phe Ile Glu Leu
195 200 205

Ser Thr Ile Ser Gly Val Phe Ile Ser Tyr Cys Tyr Ile Ile Leu Ser
210 215 220

Val Leu Glu Ile His Ser Ala Glu Gly Arg Phe Lys Ala Leu Ser Thr
225 230 235 240

Cys Thr Ser His Leu Ser Ala Val Ala Ile Phe Gln Gly Thr Leu Leu
245 250 255

Phe Met Tyr Phe Arg Pro Ser Ser Ser Tyr Ser Leu Asp Gln Asp Lys
260 265 270

Met Thr Ser Leu Phe Tyr Thr Leu Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Lys Lys Leu
290 295 300

Lys Asn Lys Ile Leu Phe
305 310

<210> 77
<211> 961
<212> DNA
<213> Homo sapiens

<400> 77
gaaatgatag caggaaacta ctccatggtg actgagttta tccttgctgg attaacaagc 60
acaccagaac tgcagctgcc tctcttcttc ctcttcctcg gaatctatgc agtaacgatg 120
gtagggaacc tgggcatgat cacactgatt ctgctcagct cccacctgca cacacccatg 180
tacttcttcc tcagcagtct gtccttcatt gacctctgcc attcaactgt cattaccccc 240
aaaatgctgg tgaactttgt gactgtgaag aacatcatct cctaccctga atgtatgact 300
cagctctatt tctttctggt ttttgttata tcagaatgtc acatgctggc agctatggca 360
tatgaccgat acgttgccat ctgtaacccc ttgctataca atgctatgat gtcctatcaa 420
gtctgcacct ggatgatatt tggggtgtat agcatgggtt ttattggtgc cacagctcac 480
acagtgtgca tgctaagagt ccatttctgt aaggttgatg taataaatca ttacttctgt 540
gatcttttcc cgttattgga gctttcttgc tcccctactt ttatcaatga ggtagttgtt 600
ctatgtttta gtgctttcaa tatccttttc ccaacactga gtatcctgag ctcttacatc 660
ttcatcattg ccagcatcct ccgtattaaa tccactgaag gcaggtccaa agccttcagc 720
acctgcagct cacacatatc agctgttgct gtgttctttg ggtctgctgc atttatgtac 780
ctacagccat catcagtcag ctccatggac caagggaaag tctcctctgt attttatacc 840
attgttgtgc ccatgctaaa ccccttgatc tacagcctga gaaataagga tgtcaaggtc 900
gcactaacaa aattttatga aaaaagtttc tcatgaaaat atgggatctg caaccctata 960
g 961

<210> 78
<211> 310
<212> PRT
<213> Homo sapiens

<400> 78

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Met Ile Ala Gly Asn Tyr Ser Met Val Thr Glu Phe Ile Leu Ala Gly
 1               5                  10                  15

Leu Thr Ser Thr Pro Glu Leu Gln Leu Pro Leu Phe Phe Leu Phe Leu
            20                  25                  30

Gly Ile Tyr Ala Val Thr Met Val Gly Asn Leu Gly Met Ile Thr Leu
        35                  40                  45

Ile Leu Leu Ser Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
    50                  55                  60

Ser Leu Ser Phe Ile Asp Leu Cys His Ser Thr Val Ile Thr Pro Lys
65                  70                  75                  80

Met Leu Val Asn Phe Val Thr Val Lys Asn Ile Ile Ser Tyr Pro Glu
                85                  90                  95

Cys Met Thr Gln Leu Tyr Phe Phe Leu Val Phe Val Ile Ser Glu Cys
            100                 105                 110

His Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
        115                 120                 125

Pro Leu Leu Tyr Asn Ala Met Met Ser Tyr Gln Val Cys Thr Trp Met
    130                 135                 140

Ile Phe Gly Val Tyr Ser Met Gly Phe Ile Gly Ala Thr Ala His Thr
145                 150                 155                 160

Val Cys Met Leu Arg Val His Phe Cys Lys Val Asp Val Ile Asn His
                165                 170                 175

Tyr Phe Cys Asp Leu Phe Pro Leu Leu Glu Leu Ser Cys Ser Pro Thr
            180                 185                 190

Phe Ile Asn Glu Val Val Val Leu Cys Phe Ser Ala Phe Asn Ile Leu
        195                 200                 205

Phe Pro Thr Leu Ser Ile Leu Ser Ser Tyr Ile Phe Ile Ile Ala Ser
    210                 215                 220

Ile Leu Arg Ile Lys Ser Thr Glu Gly Arg Ser Lys Ala Phe Ser Thr
225                 230                 235                 240

Cys Ser Ser His Ile Ser Ala Val Ala Val Phe Phe Gly Ser Ala Ala
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245 250 255

Phe Met Tyr Leu Gln Pro Ser Ser Val Ser Ser Met Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Ile Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Thr Lys Phe
290 295 300

Tyr Glu Lys Ser Phe Ser
305 310

<210> 79
<211> 971
<212> DNA
<213> Homo sapiens

<400> 79
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aaaccagaga tgcagctgcc cctcttcttc ctctttctag caatctatgt ggtcacagtg 120
gtggggaatc tgggcatgat cactctgata ctattcagtt ctcaactgca cacacccatg 180
tacttttttc tcagcagtct gtccttcatt gacctctgcc agtccactgt cattattccc 240
aaaatgctgg tgaactttgt gacagtgaag aacatcatct cctatcctga atgcatgact 300
cagctctact tttttgttac ttttgctatt gcagagtgtc acatgttagc tgtaatggca 360
tatgatcgct atgttgccat cggtaacccc ttgctttaca atattatgat gtcctatcga 420
gtctgttctt ggatgatatt tggagtatat attatggctt ttattggtgc cacatctcac 480
acagtctgca tgttaagagt gcatttctgt aagactgatg taataaatca ttacttttgt 540
gatatttatc cactactgga actctcttgt tctgatacct ttattaatga agtagtactt 600
ttatgtttca gtgtttttaa cttcttgatt ccaactctga caattctaag ctcttacatc 660
ttcatcatag ccagcatcct ccggattaaa tccactgaag gcaggtacaa agccttcagc 720
acctgcagct cacacatctc tgcagttgct atcttctttg ggtctactgc atttatgtac 780
ttgcagccat cttcggtcaa ctctatggat caagggaaag tgtcttctgt attttatagc 840
attgttgtgc ccatgctgaa ccctttgatc tacagcctga gaaataagga tgtcaaagtt 900
gctctaaata agttctttga aagaaagttt ttcttgtgaa ctcacattca tatttagagg 960
gctagcaaac a 971

<210> 80
<211> 311
<212> PRT
<213> Homo sapiens

<400> 80
Met Leu Lys Gly Asn Leu Ser Glu Val Asn Glu Phe Ile Leu Val Gly
1 5 10 15

Leu Thr Asn Lys Pro Glu Met Gln Leu Pro Leu Phe Phe Leu Phe Leu
20 25 30

Ala Ile Tyr Val Val Thr Val Val Gly Asn Leu Gly Met Ile Thr Leu
35 40 45

Ile Leu Phe Ser Ser Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys Gln Ser Thr Val Ile Ile Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Thr Val Lys Asn Ile Ile Ser Tyr Pro Glu
85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Val Thr Phe Ala Ile Ala Glu Cys
100 105 110

His Met Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Gly Asn
115 120 125

Pro Leu Leu Tyr Asn Ile Met Met Ser Tyr Arg Val Cys Ser Trp Met
130 135 140

Ile Phe Gly Val Tyr Ile Met Ala Phe Ile Gly Ala Thr Ser His Thr
145 150 155 160

Val Cys Met Leu Arg Val His Phe Cys Lys Thr Asp Val Ile Asn His
165 170 175

Tyr Phe Cys Asp Ile Tyr Pro Leu Leu Glu Leu Ser Cys Ser Asp Thr
180 185 190

Phe Ile Asn Glu Val Val Leu Leu Cys Phe Ser Val Phe Asn Phe Leu
195 200 205

Ile Pro Thr Leu Thr Ile Leu Ser Ser Tyr Ile Phe Ile Ile Ala Ser
210 215 220

Ile Leu Arg Ile Lys Ser Thr Glu Gly Arg Tyr Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Ser Ala Val Ala Ile Phe Phe Gly Ser Thr Ala
245 250 255

Phe Met Tyr Leu Gln Pro Ser Ser Val Asn Ser Met Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Ser Ile Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Asn Lys Phe
290 295 300

Phe Glu Arg Lys Phe Phe Leu
305 310

<210> 81
<211> 958
<212> DNA
<213> Homo sapiens

<400> 81
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aaccagagct gcagctgccc ctcttcctcc tcttccttgg aatctacttg ttcacggagc 120
tggggaacct gggcatggtc atcttgatct cgattagctc ccacctgcac acccccatgt 180
acttcttcct cagcagcctg tccttcattg acctctgtta ctctactgtc attattccca 240
aaatgctggt gaactttgtg acagagaaga acatcatctc ctaccctgaa tgcatgacac 300
agctctactg cttcttagtc ttagttatat ctgagtgtta catgttgtct gcaatggcgt 360
atgaccgcta tgttgccatc tgtaacccct tgaggtataa tgtcaccatg tcttaccaag 420
tctgtttatg gatgataggt ggggtgtatt gcataggtct cattgaagcc acacttcata 480
ctgtttgcat gctgcgagta cttttctgca aggctaatgt agtaaaccac ttcttctgtg 540
atcttcttcc attgctgcaa cttgcttgct ccagcacatt tgtcaatgag gtagtacttc 600
tgtgcttcag tacttttaat ttctgtgtgc caatgctgac aatcttgagc tcttacagct 660
ttatcattgc cagaatcctc cgcattaaat ccactgaaag cagattcaaa gccttcagca 720
cctgcagctc ccacttcact tctgttgctg tcttctttgg ttctttggga ttcatgtact 780
ttcagccatc atcagttagc tccgaagatc aagggaaagt gtcctctgtg ttttacacta 840
ctgttgtgcc catgctgaac ccgttgatct acagtctgag gaataaggat gtcaaagttg 900
ctctaaataa gttacttcga aagaagacat ttcatatgta aaattatatt tttcttta 958

<210> 82
<211> 312
<212> PRT
<213> Homo sapiens

<400> 82
Met Ala Glu Gly Asn Gln Ser Thr Val Thr Glu Phe Ile Leu Thr Gly
1 5 10 15

Leu Thr Asn Lys Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Leu Phe Thr Glu Leu Gly Asn Leu Gly Met Val Ile Leu

35 40 45

Ile Ser Ile Ser Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys Tyr Ser Thr Val Ile Ile Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Thr Glu Lys Asn Ile Ile Ser Tyr Pro Glu
85 90 95

Cys Met Thr Gln Leu Tyr Cys Phe Leu Val Leu Val Ile Ser Glu Cys
100 105 110

Tyr Met Leu Ser Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Asn Val Thr Met Ser Tyr Gln Val Cys Leu Trp Met
130 135 140

Ile Gly Gly Val Tyr Cys Ile Gly Leu Ile Glu Ala Thr Leu His Thr
145 150 155 160

Val Cys Met Leu Arg Val Leu Phe Cys Lys Ala Asn Val Val Asn His
165 170 175

Phe Phe Cys Asp Leu Leu Pro Leu Leu Gln Leu Ala Cys Ser Ser Thr
180 185 190

Phe Val Asn Glu Val Val Leu Leu Cys Phe Ser Thr Phe Asn Phe Cys
195 200 205

Val Pro Met Leu Thr Ile Leu Ser Ser Tyr Ser Phe Ile Ile Ala Arg
210 215 220

Ile Leu Arg Ile Lys Ser Thr Glu Ser Arg Phe Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Phe Thr Ser Val Ala Val Phe Phe Gly Ser Leu Gly
245 250 255

Phe Met Tyr Phe Gln Pro Ser Ser Val Ser Ser Glu Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Thr Val Val Pro Met Leu Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Asn Lys Leu

290 295 300

Leu Arg Lys Lys Thr Phe His Met
305 310

<210> 83
<211> 981
<212> DNA
<213> Homo sapiens

<400> 83
aaatggcata cagcaatcag tccagagtga ctgagttcat catctctggg ttaaccaaca 60
aaccagagct gcagctgccc ctcttcctcc tcttccttgg aatctacctg ttcacagtgc 120
tggggaacct gggcatgatc atcctgatcc tgctcagctc gcacctgcac acccccatgt 180
acttcttcct cagcagcctg tccttcattg acctctgcta ctccacaata atcacccctа 240
aaatgctggt gaactttgtg acaacaaaaa atgtcatctc ctatcaggaa tgtatgactc 300
agctctattt cttcattgct tttgttatat ctgagtgtca catgttggct gcaatggcat 360
atgaccgcta tgtcgccatt tgtaatccct tgctttacaa tgtcaccatg tcttaccaag 420
tctgttcctg gatggtaggt ggggtatatg gcatgggctt cattggtgca gcaattcata 480
ctttctgcat gctaagagtg gttttctgta aggataatat aataaaccat tacttctgtg 540
atcttttccc attgatggag cttgcctgct ccagtactta tgtcaatgag gtagtactcc 600
tgtctctcag tgctttcaat atctttattc caacattgac tatcctgggt tcttacatct 660
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catgtagctc ccacttctct gccgtttctg tcttctttgg ttccctggca ttcatgtatc 780
tgcagccctt ctctgtcagc tccaaagaca aaggcaaagt gtcctctgtg ttttacacta 840
ctattgtgcc catgctgaac cctatgatct acagcctgag gaatagggat gttaaacttg 900
ctctaaataa gttatttcaa aaaaagaagt ttcatgtata aaaaaaaaat ttatcatagc 960
aaaaatatgc catatctatg a 981

<210> 84
<211> 312
<212> PRT
<213> Homo sapiens

<400> 84
Met Ala Tyr Ser Asn Gln Ser Arg Val Thr Glu Phe Ile Ile Ser Gly
1 5 10 15

Leu Thr Asn Lys Pro Glu Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Gly Ile Tyr Leu Phe Thr Val Leu Gly Asn Leu Gly Met Ile Ile Leu
35 40 45

Ile Leu Leu Ser Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Ser Leu Ser Phe Ile Asp Leu Cys Tyr Ser Thr Ile Ile Thr Pro Lys
65 70 75 80

Met Leu Val Asn Phe Val Thr Thr Lys Asn Val Ile Ser Tyr Gln Glu
85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Ile Ala Phe Val Ile Ser Glu Cys
100 105 110

His Met Leu Ala Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Asn Val Thr Met Ser Tyr Gln Val Cys Ser Trp Met
130 135 140

Val Gly Gly Val Tyr Gly Met Gly Phe Ile Gly Ala Ala Ile His Thr
145 150 155 160

Phe Cys Met Leu Arg Val Val Phe Cys Lys Asp Asn Ile Ile Asn His
165 170 175

Tyr Phe Cys Asp Leu Phe Pro Leu Met Glu Leu Ala Cys Ser Ser Thr
180 185 190

Tyr Val Asn Glu Val Val Leu Leu Ser Leu Ser Ala Phe Asn Ile Phe
195 200 205

Ile Pro Thr Leu Thr Ile Leu Gly Ser Tyr Ile Phe Ile Ile Ile Ser
210 215 220

Ile Leu Arg Ile Lys Ser Thr Glu Gly Arg Phe Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Phe Ser Ala Val Ser Val Phe Phe Gly Ser Leu Ala
245 250 255

Phe Met Tyr Leu Gln Pro Phe Ser Val Ser Ser Lys Asp Lys Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Thr Ile Val Pro Met Leu Asn Pro Met
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Val Lys Leu Ala Leu Asn Lys Leu
290 295 300

Phe Gln Lys Lys Lys Phe His Val
305 310

<210> 85
<211> 1013
<212> DNA
<213> Homo sapiens

<400> 85
ctgattcatc cataaacatg acaaaccaca ctatggtgac agaattcacc ttactgggca 60
tccctgaaac agagggcctg gagaatgtcc tactcttcct gttctcaaca ttatatgcct 120
gtgccctgct gggaaactta cttcttctta ctgcagtcat ctcttcccca caactccaca 180
cacccatgta ctttttcttg ggaaacctct ccatctttga catgggtttt tgttccacca 240
cagctccaaa gatgttgtca tatctctcag gacagggtgg agggatctct ttccagggat 300
gtgttgtaca acacttcttc tatcattgtc tgggttgcac agagtgcttc ctatacacag 360
tgatggccta tgaccgcttt gttgccatat gcttcccttt gagatacaca atcatcatga 420
accacagagt atgctgtgtc ttggccacag ggacctggat gagtggctgt gtgcacgcca 480
ctatcctaac ttgcctcact ttccagttgc cctactgtgg ccccagcaat gtgggttatt 540
atttctgtga catgcctgca gtgttacctc tagcctgtga ggaccactct ctagcacaga 600
gggtaggctt tacaaatgtt ggtcttttat ctctcatttg tttctttctc atccttgtgt 660
cctacactcg aattgggatc tccatctcta aaattcgctc aacagaaggc aggcagagag 720
cattctccac atgcagtgcc cacctcacag ccatcatctg tgcttatgga ccagtcattg 780
ttatctacct tcagcctaat cctagtccat tgcttggtgc agttattcag atattgaaca 840
atcttgtgac acccaccatc aatccattga tctacagcct gaggaataag gatgtgaaag 900
cagccctaag gcatgtgttt cttaagagaa gtctcagttt ggaaagtaaa tgaacatcta 960
aatctttact taacacaatt tcaccattta atagggcaga tttgcatcta caa 1013

<210> 86
<211> 311
<212> PRT
<213> Homo sapiens

<400> 86
Met Thr Asn His Thr Met Val Thr Glu Phe Thr Leu Leu Gly Ile Pro
1 5 10 15

Glu Thr Glu Gly Leu Glu Asn Val Leu Leu Phe Leu Phe Ser Thr Leu
20 25 30

Tyr Ala Cys Ala Leu Leu Gly Asn Leu Leu Leu Leu Thr Ala Val Ile
35 40 45

Ser Ser Pro Gln Leu His Thr Pro Met Tyr Phe Phe Leu Gly Asn Leu
50 55 60

Ser Ile Phe Asp Met Gly Phe Cys Ser Thr Thr Ala Pro Lys Met Leu
65 70 75 80

Ser Tyr Leu Ser Gly Gln Gly Gly Gly Ile Ser Phe Gln Gly Cys Val
85 90 95

Val Gln His Phe Phe Tyr His Cys Leu Gly Cys Thr Glu Cys Phe Leu
100 105 110

Tyr Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Phe Pro Leu
115 120 125

Arg Tyr Thr Ile Ile Met Asn His Arg Val Cys Cys Val Leu Ala Thr
130 135 140

Gly Thr Trp Met Ser Gly Cys Val His Ala Thr Ile Leu Thr Cys Leu
145 150 155 160

Thr Phe Gln Leu Pro Tyr Cys Gly Pro Ser Asn Val Gly Tyr Tyr Phe
165 170 175

Cys Asp Met Pro Ala Val Leu Pro Leu Ala Cys Glu Asp His Ser Leu
180 185 190

Ala Gln Arg Val Gly Phe Thr Asn Val Gly Leu Leu Ser Leu Ile Cys
195 200 205

Phe Phe Leu Ile Leu Val Ser Tyr Thr Arg Ile Gly Ile Ser Ile Ser
210 215 220

Lys Ile Arg Ser Thr Glu Gly Arg Gln Arg Ala Phe Ser Thr Cys Ser
225 230 235 240

Ala His Leu Thr Ala Ile Ile Cys Ala Tyr Gly Pro Val Ile Val Ile
245 250 255

Tyr Leu Gln Pro Asn Pro Ser Pro Leu Leu Gly Ala Val Ile Gln Ile
260 265 270

Leu Asn Asn Leu Val Thr Pro Thr Ile Asn Pro Leu Ile Tyr Ser Leu
275 280 285

Arg Asn Lys Asp Val Lys Ala Ala Leu Arg His Val Phe Leu Lys Arg
290 295 300

Ser Leu Ser Leu Glu Ser Lys
305 310

<210> 87
<211> 948

<212> DNA
<213> Homo sapiens

<400> 87
ctatgaagaa cctttcagta gtgactcagt ttatcctact gggcatccca cacacagagg 60
gtgtggagac catgctcttt gtcctgtttt tttctttcta catcttcact ctcgtgggga 120
acttgctcat actccttgca attgtctcct ccagtcggct tcacactccc atgtacttct 180
tcctgtgcca gctgtcagtg tgtgacatat ttttcccgtc tgtgagttct cccaagatgc 240
tgttctacct ctcaggaaat actccagcca tctcctatgc aggttgtgtg tcccagctct 300
tcttctatca tttcctgggt ggtactgagt gtttcctgta cacagtgatg gcttatgacc 360
gttttgttgc catatgctac cctctacgct actcagtcat aatgagtcat agaatttgtg 420
ccttcctggc catggggaca gcagttttcg gctgtattca ttccaccttt ctaactactc 480
tcaccttcca gttgccctac tgtggcccca aagatgtgaa ctattacttc tgtgatattc 540
ctgtggtgat gaagctggct tgtgcagaca catcgaccct ggagatggta gggttcatca 600
gtgtgggtct catgcccctc agttgcttct tcttcatcct cacctcctac agctgtatag 660
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gtgcccattt tactgccatt ttgctctttt acatgccagt gattttcatt tatctaaggc 780
caacaccaag tccttggttg gatgcaactg ttcagattct gaacaatctg gtcaccccta 840
tgctaaatcc gttaatttac agtcttagga ataaggaggt gaaatcatca ctgtggactg 900
tcctacatct gctgtgcttc cttcccaagc atttgtaaag aacgatca 948

<210> 88
<211> 311
<212> PRT
<213> Homo sapiens

<400> 88
Met Lys Asn Leu Ser Val Val Thr Gln Phe Ile Leu Leu Gly Ile Pro
1 5 10 15

His Thr Glu Gly Val Glu Thr Met Leu Phe Val Leu Phe Phe Ser Phe
20 25 30

Tyr Ile Phe Thr Leu Val Gly Asn Leu Leu Ile Leu Leu Ala Ile Val
35 40 45

Ser Ser Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Cys Gln Leu
50 55 60

Ser Val Cys Asp Ile Phe Phe Pro Ser Val Ser Ser Pro Lys Met Leu
65 70 75 80

Phe Tyr Leu Ser Gly Asn Thr Pro Ala Ile Ser Tyr Ala Gly Cys Val
85 90 95

Ser Gln Leu Phe Phe Tyr His Phe Leu Gly Gly Thr Glu Cys Phe Leu
100 105 110

Tyr Thr Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Tyr Pro Leu
115 120 125

Arg Tyr Ser Val Ile Met Ser His Arg Ile Cys Ala Phe Leu Ala Met
130 135 140

Gly Thr Ala Val Phe Gly Cys Ile His Ser Thr Phe Leu Thr Thr Leu
145 150 155 160

Thr Phe Gln Leu Pro Tyr Cys Gly Pro Lys Asp Val Asn Tyr Tyr Phe
165 170 175

Cys Asp Ile Pro Val Val Met Lys Leu Ala Cys Ala Asp Thr Ser Thr
180 185 190

Leu Glu Met Val Gly Phe Ile Ser Val Gly Leu Met Pro Leu Ser Cys
195 200 205

Phe Phe Phe Ile Leu Thr Ser Tyr Ser Cys Ile Val Arg Ser Ile Leu
210 215 220

Gln Ile Arg Ser Thr Glu Gly Arg His Arg Ala Phe Ser Thr Cys Ser
225 230 235 240

Ala His Phe Thr Ala Ile Leu Leu Phe Tyr Met Pro Val Ile Phe Ile
245 250 255

Tyr Leu Arg Pro Thr Pro Ser Pro Trp Leu Asp Ala Thr Val Gln Ile
260 265 270

Leu Asn Asn Leu Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser Leu
275 280 285

Arg Asn Lys Glu Val Lys Ser Ser Leu Trp Thr Val Leu His Leu Leu
290 295 300

Cys Phe Leu Pro Lys His Leu
305 310

<210> 89
<211> 961
<212> DNA
<213> Homo sapiens

<400> 89
aatggctttc ggaaataggt cttttgtgac tgaattcatc ttgattggct taacagacca 60

gcccaatctc caactccctc tgttcttctt gttccttgta atgtatatag taactatgac 120
cgggaatttg ggtttggtaa ttctaattgg actgaattct caccttcaca ccccgatgta 180
ctttttttctc tttaacttgt ctttgataga cctctgttac tcttcagtgt ttacacccaa 240
aatgctgttg aacttcatat taaataagaa tattatctct tatacggggt gtatgaccca 300
actctatttt tattcattct ttgttatttc tgagtgttat gtgttaatgt caatggccta 360
tgatcgctat gtagccatct gtaatccact cttatataat attgctatga cacctaaaat 420
atgttcctat cttatgcttg gttcatactt gatggcattt tctggtgcca tggctcacac 480
aggatgtatg ttaagattga ccttctgtga tgcaaacacc atcaatcact acttctgtga 540
catcctccct gtgatgcagc tctcctgcac cagcacctat gtcaatgaac tggaagtttt 600
cattgtcgtg ggcatcaata tccttgtgcc cagcatcacc atttttatct cttatgggtt 660
cattctctcc agcattttcc acatcaactc caatgagggc aggtccaagg ccttcagcac 720
ctgcagttcc cacataattg ctgtttctct cttctttgga tcaggtgcat ttatgtatct 780
taaaccctcc tcagttgggt ctatggatga aggaaaaatc tcttctgtct tttataccaa 840
tgtggttccc atgatgaacc ccttaatcta tagcttgagg aacaaagatg ttaaagttgc 900
cctgaggata accttgagta ggtggaaact atggtagaaa cagcatctcc atttgctttt 960
a 961

<210> 90
<211> 311
<212> PRT
<213> Homo sapiens

<400> 90
Met Ala Phe Gly Asn Arg Ser Phe Val Thr Glu Phe Ile Leu Ile Gly
1 5 10 15

Leu Thr Asp Gln Pro Asn Leu Gln Leu Pro Leu Phe Phe Leu Phe Leu
20 25 30

Val Met Tyr Ile Val Thr Met Thr Gly Asn Leu Gly Leu Val Ile Leu
35 40 45

Ile Gly Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Phe
50 55 60

Asn Leu Ser Leu Ile Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Lys
65 70 75 80

Met Leu Leu Asn Phe Ile Leu Asn Lys Asn Ile Ile Ser Tyr Thr Gly
85 90 95

Cys Met Thr Gln Leu Tyr Phe Tyr Ser Phe Phe Val Ile Ser Glu Cys
100 105 110

Tyr Val Leu Met Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Asn Ile Ala Met Thr Pro Lys Ile Cys Ser Tyr Leu
130 135 140

Met Leu Gly Ser Tyr Leu Met Ala Phe Ser Gly Ala Met Ala His Thr
145 150 155 160

Gly Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asn His
165 170 175

Tyr Phe Cys Asp Ile Leu Pro Val Met Gln Leu Ser Cys Thr Ser Thr
180 185 190

Tyr Val Asn Glu Leu Glu Val Phe Ile Val Val Gly Ile Asn Ile Leu
195 200 205

Val Pro Ser Ile Thr Ile Phe Ile Ser Tyr Gly Phe Ile Leu Ser Ser
210 215 220

Ile Phe His Ile Asn Ser Asn Glu Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Ile Ala Val Ser Leu Phe Phe Gly Ser Gly Ala
245 250 255

Phe Met Tyr Leu Lys Pro Ser Ser Val Gly Ser Met Asp Glu Gly Lys
260 265 270

Ile Ser Ser Val Phe Tyr Thr Asn Val Val Pro Met Met Asn Pro Leu
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Val Ala Leu Arg Ile Thr
290 295 300

Leu Ser Arg Trp Lys Leu Trp
305 310

<210> 91
<211> 978
<212> DNA
<213> Homo sapiens

<400> 91
aatggggctg gaaaatggtt ctttggtgac tgaattcatt ctactggggt taacaaatga 60
tcctgatctc cagttacccc tgttcctact ctttctgcta atatacacaa caacagcagt 120
ggggaatttg gctttgatca ctttaattgc actgaattct caccttcaca cccccatgta 180
ctttttcctt ttaaacttgt cctgcattga tctttgttat tcatctgtaa ttacacccaa 240
aatgctgatg aacttcttag taaggaagaa cattatctcc tacatgggat gtatgaccca 300

gctctatttc ttctgttttt ttgccatttg tgaatgttgt gttctgacat caatggccta 360
tgatcgttat gtggccatat gcaatccact cttgtataac atcactatgt ctcccaaggt 420
ttgttcctat cttatgcttg gttcatacat aatgggattt tctggtgcca tgattcacac 480
tggatgcatt ctgagactga ccttctgtga caggaacatc atcaaccact atttctgtga 540
tcttttccct ctgttgcagc tctcctgtac cagcacttat gccaatgaaa tagagattct 600
aatcgtaggt ggtaaagata tcattgtgcc cagtgttatc atctttacct cttatggttt 660
cattctctca aatatccttc aaatgagatc cactgcagga atgtccaaag catttagcac 720
ctgtagctcc catatacttg ctgtttcttt attctttggc tcatgtgcat ttatgtatct 780
tcagccctcc tcacctgggt ctatggatca gggaaaagtc tcttctgtct tctataccat 840
tgtggttccc atgatgaacc ccttaatcta tagctttagg aacaaggatg ttaaaattgc 900
cctgagaaaa atctttggca aaaggagatt ttcataaaaa aaaaaaccaa aaccaaaaac 960
aaaaaaaaaa aacctttt 978

<210> 92
<211> 311
<212> PRT
<213> Homo sapiens

<400> 92
Met Gly Leu Glu Asn Gly Ser Leu Val Thr Glu Phe Ile Leu Leu Gly
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Leu Thr Asn Asp Pro Asp Leu Gln Leu Pro Leu Phe Leu Leu Phe Leu
20 25 30

Leu Ile Tyr Thr Thr Thr Ala Val Gly Asn Leu Ala Leu Ile Thr Leu
35 40 45

Ile Ala Leu Asn Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Leu
50 55 60

Asn Leu Ser Cys Ile Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Lys
65 70 75 80

Met Leu Met Asn Phe Leu Val Arg Lys Asn Ile Ile Ser Tyr Met Gly
85 90 95

Cys Met Thr Gln Leu Tyr Phe Phe Cys Phe Phe Ala Ile Cys Glu Cys
100 105 110

Cys Val Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Leu Tyr Asn Ile Thr Met Ser Pro Lys Val Cys Ser Tyr Leu
130 135 140

Met Leu Gly Ser Tyr Ile Met Gly Phe Ser Gly Ala Met Ile His Thr

145 150 155 160

Gly Cys Ile Leu Arg Leu Thr Phe Cys Asp Arg Asn Ile Ile Asn His
165 170 175

Tyr Phe Cys Asp Leu Phe Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
180 185 190

Tyr Ala Asn Glu Ile Glu Ile Leu Ile Val Gly Gly Lys Asp Ile Ile
195 200 205

Val Pro Ser Val Ile Ile Phe Thr Ser Tyr Gly Phe Ile Leu Ser Asn
210 215 220

Ile Leu Gln Met Arg Ser Thr Ala Gly Met Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Leu Ala Val Ser Leu Phe Phe Gly Ser Cys Ala
245 250 255

Phe Met Tyr Leu Gln Pro Ser Ser Pro Gly Ser Met Asp Gln Gly Lys
260 265 270

Val Ser Ser Val Phe Tyr Thr Ile Val Val Pro Met Met Asn Pro Leu
275 280 285

Ile Tyr Ser Phe Arg Asn Lys Asp Val Lys Ile Ala Leu Arg Lys Ile
290 295 300

Phe Gly Lys Arg Arg Phe Ser
305 310

<210> 93
<211> 993
<212> DNA
<213> Homo sapiens

<400> 93
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tatacagcca ctgtgatggg aaacctgagc ttaatgactc tcatctgtct gaattctcat 180
ctgcacacac caatgtactt ttttattctc aacttgtcct tcattgactt ctgttattca 240
tttgttttta ccccaaaaat gctgatggga tttgtctcag aacacaacac catctccttc 300
acaggatgca tgactcagct attttttttc tgtctttttg ttaactctga gtgctatgtg 360
ctgacagcca tggcctatga tagatatgtg gccatctgta ggcctctgct gtacacagta 420
gttatgtctc ccagggcttg ttccctgtta atgcttgctg cacacttgat gggtgtctct 480
tctgctgttg tacacacagg atgtataatt cagctcaggt tttgtggttc aaaagtaatc 540

aaccactaca tgtgtgatac tttccccctc cttgagctct cctgtggtag cagtcatgtc 600
aacgagcttg taagttctgt ttctgtggct gtcgttgttg ttatatctag cctaattatt 660
gtatcctcat atgctttgat tcttgtcaat gttatccatt tgtcatcatc taagggttgg 720
tccaaagctg tgagcacatg tagctctcat ataataactg ttgccctgtt ctatggattt 780
ggtttgcttg ctcatatcaa gccatcatct gcagaatctg tagttcagag gaaatttttt 840
tcagtagttt atacttttgt gctgcctttg ttgaatccgc tcatttacag cctcaggaac 900
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ttatgttgta gccataaatc ttgactctga ttt 993

<210> 94
<211> 327
<212> PRT
<213> Homo sapiens

<400> 94

Met	Gln	His	Met	Lys	Gln	Met	Ile	Met	Glu	Asn	Asp	Ser	Ser	Val	Ser
1				5				10					15		
Glu	Phe	Ile	Leu	Met	Gly	Leu	Thr	Tyr	Gln	Pro	Glu	Leu	Trp	Trp	Pro
			20					25					30		
Leu	Phe	Val	Leu	Phe	Leu	Val	Asn	Tyr	Thr	Ala	Thr	Val	Met	Gly	Asn
		35					40					45			
Leu	Ser	Leu	Met	Thr	Leu	Ile	Cys	Leu	Asn	Ser	His	Leu	His	Thr	Pro
	50					55					60				
Met	Tyr	Phe	Phe	Ile	Leu	Asn	Leu	Ser	Phe	Ile	Asp	Phe	Cys	Tyr	Ser
65					70					75					80
Phe	Val	Phe	Thr	Pro	Lys	Met	Leu	Met	Gly	Phe	Val	Ser	Glu	His	Asn
				85					90					95	
Thr	Ile	Ser	Phe	Thr	Gly	Cys	Met	Thr	Gln	Leu	Phe	Phe	Phe	Cys	Leu
			100					105					110		
Phe	Val	Asn	Ser	Glu	Cys	Tyr	Val	Leu	Thr	Ala	Met	Ala	Tyr	Asp	Arg
		115					120					125			
Tyr	Val	Ala	Ile	Cys	Arg	Pro	Leu	Leu	Tyr	Thr	Val	Val	Met	Ser	Pro
	130					135					140				
Arg	Ala	Cys	Ser	Leu	Leu	Met	Leu	Ala	Ala	His	Leu	Met	Gly	Val	Ser
145					150					155					160
Ser	Ala	Val	Val	His	Thr	Gly	Cys	Ile	Ile	Gln	Leu	Arg	Phe	Cys	Gly
				165					170					175	

Ser Lys Val Ile Asn His Tyr Met Cys Asp Thr Phe Pro Leu Leu Glu
180 185 190

Leu Ser Cys Gly Ser Ser His Val Asn Glu Leu Val Ser Ser Val Ser
195 200 205

Val Ala Val Val Val Val Ile Ser Ser Leu Ile Ile Val Ser Ser Tyr
210 215 220

Ala Leu Ile Leu Val Asn Val Ile His Leu Ser Ser Ser Lys Gly Trp
225 230 235 240

Ser Lys Ala Val Ser Thr Cys Ser Ser His Ile Ile Thr Val Ala Leu
245 250 255

Phe Tyr Gly Phe Gly Leu Leu Ala His Ile Lys Pro Ser Ser Ala Glu
260 265 270

Ser Val Val Gln Arg Lys Phe Phe Ser Val Val Tyr Thr Phe Val Leu
275 280 285

Pro Leu Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
290 295 300

Leu Ala Leu Lys Arg Thr Leu Lys Thr Val Thr Ile Gln Gly Lys Cys
305 310 315 320

Leu Cys Cys Ser His Lys Ser
325

<210> 95
<211> 936
<212> DNA
<213> Homo sapiens

<400> 95
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attgggaaat ttatctttga taatattaac tgtgttgaat tcttaccttc acacccctat 180
gtacttttt ctctttaact tgtcctttgt agacctttgc tattcttctg tgttcactcc 240
acaaatgcta atgaatttca taaggaagaa tacaacttct tacatggaat gtatggccca 300
actctatttc tcttgttttt ttgttatttc tgagtgttat gtgttgactt caatggccta 360
tgatcgctat gtggccatct gtaaaccact gttgtataat cttgtcatgt cctctaaatt 420
atgcttgaac ctaatgcttg tttcctactt tattgcattt tctgagtctg tagctcacac 480
tgcttgcatg cttagactga ccttctgtga tgccaacacc atcaactact acttctgtga 540
tattcccccc ttgcttcagc tctcctgtac gaccacacgt gtcaatgagg ttgtaatttt 600

tgttgttggg agcatcaata tcattattcc tacttcaact atatttgtct cctatggttt 660
tattctctcc agtatctttc gcatcagttc ttctgaaggc aggtccaaag ctttcagcac 720
ttgtagctca cacatcattg ctgcttttct gttcttcggc tcaggtgcaa tcaggtattt 780
caaaccctcc tcagatgggt ctatggatga aggaaaaatc tcttctgtct tttataccaa 840
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cctgaggaga acactgagga aaaggaactt ttgact 936

<210> 96
<211> 309
<212> PRT
<213> Homo sapiens

<400> 96
Met Asp Ser Val Asn Val Ser Leu Val Ala Glu Phe Ile Leu Val Gly
1 5 10 15

Leu Thr Asp Lys Pro Tyr Leu Gln Ile Pro Leu Phe Phe Val Phe Leu
20 25 30

Ala Met Tyr Leu Val Thr Ala Leu Gly Asn Leu Ser Leu Ile Ile Leu
35 40 45

Thr Val Leu Asn Ser Tyr Leu His Thr Pro Met Tyr Phe Phe Leu Phe
50 55 60

Asn Leu Ser Phe Val Asp Leu Cys Tyr Ser Ser Val Phe Thr Pro Gln
65 70 75 80

Met Leu Met Asn Phe Ile Arg Lys Asn Thr Thr Ser Tyr Met Glu Cys
85 90 95

Met Ala Gln Leu Tyr Phe Ser Cys Phe Phe Val Ile Ser Glu Cys Tyr
100 105 110

Val Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Lys Pro
115 120 125

Leu Leu Tyr Asn Leu Val Met Ser Ser Lys Leu Cys Leu Asn Leu Met
130 135 140

Leu Val Ser Tyr Phe Ile Ala Phe Ser Glu Ser Val Ala His Thr Ala
145 150 155 160

Cys Met Leu Arg Leu Thr Phe Cys Asp Ala Asn Thr Ile Asn Tyr Tyr
165 170 175

Phe Cys Asp Ile Pro Pro Leu Leu Gln Leu Ser Cys Thr Thr Thr Arg

180 185 190

Val Asn Glu Val Val Ile Phe Val Val Gly Ser Ile Asn Ile Ile Ile
195 200 205

Pro Thr Ser Thr Ile Phe Val Ser Tyr Gly Phe Ile Leu Ser Ser Ile
210 215 220

Phe Arg Ile Ser Ser Ser Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
225 230 235 240

Ser Ser His Ile Ile Ala Ala Phe Leu Phe Phe Gly Ser Gly Ala Ile
245 250 255

Arg Tyr Phe Lys Pro Ser Ser Asp Gly Ser Met Asp Glu Gly Lys Ile
260 265 270

Ser Ser Val Phe Tyr Thr Asn Val Ile Pro Met Ile Asn Pro Leu Leu
275 280 285

Tyr Ser Leu Arg Asn Lys His Ile Lys Val Ala Leu Arg Arg Thr Leu
290 295 300

Arg Lys Arg Asn Phe
305

<210> 97
<211> 1015
<212> DNA
<213> Homo sapiens

<400> 97
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gggaaacttg ggcttgatca tcctgattgg cctcaatcct cacctgtaca cccccatgta 180
ctatttcctc ttcaacctct ccttcattga tctttgctac tcttctgtat ccagtcccaa 240
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gctatttttc ttcctctttt ttgttatctc tgaatgctac atgttgacct caatggccta 360
tgatcgctat gtagccatct gtaatccact gctgtataag gtcaccatgt ccccacaggt 420
ctgctcaatg ctatcatttg cttcttatgg gatggcattt gctggagcct ctgcccacac 480
aggctgcatg ctccgactga ttttctgcaa tgccaatgtc atcaactttt atttgtgtga 540
cattctgccc ctcctccaac tttcttgcac cagcacctat gttaatgaag tcgttgttct 600
catagttgtg ggtattaaca tcacagtccc cagcttcacc atcctcattt cctatgtttt 660
catccttgcc aacattctaa acatcaaatc cacacaagga agatcaaaag ccttcagcac 720
ctgcagctct cacattatgg caatttctct gtttttgggg tcaggggcat tcatgtatct 780
taatcattct ggatctatga accagggaaa aatttcttct gttttctaca ctaatgtggt 840
tcccatgttc aaccctctga tctacagttt gaggaacaaa gatgtgaaaa tagcactgaa 900

gaaagttatg atgagagttc acagcagatt catatcctga gtagagataa aataagaact 960
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<210> 98
<211> 312
<212> PRT
<213> Homo sapiens

<400> 98

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Met Leu Thr Gly Asn Gly Ser Phe Val Thr Glu Phe Val Leu Ala Gly
  1               5                  10                  15

Leu Thr Asp Arg Pro Glu Leu Gln Leu Pro Leu Phe Tyr Leu Phe Leu
             20                  25                  30

Ile Ile Tyr Thr Val Thr Val Val Gly Asn Leu Gly Leu Ile Ile Leu
         35                  40                  45

Ile Gly Leu Asn Pro His Leu Tyr Thr Pro Met Tyr Tyr Phe Leu Phe
     50                  55                  60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Ser Ser Pro Lys
 65                  70                  75                  80

Met Leu Met Asn Phe Val Phe Glu Lys Asn Ser Ile Ser Tyr Glu Gly
                 85                  90                  95

Cys Met Thr Gln Leu Phe Phe Phe Leu Phe Phe Val Ile Ser Glu Cys
            100                 105                 110

Tyr Met Leu Thr Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn
        115                 120                 125

Pro Leu Leu Tyr Lys Val Thr Met Ser Pro Gln Val Cys Ser Met Leu
    130                 135                 140

Ser Phe Ala Ser Tyr Gly Met Ala Phe Ala Gly Ala Ser Ala His Thr
145                 150                 155                 160

Gly Cys Met Leu Arg Leu Ile Phe Cys Asn Ala Asn Val Ile Asn Phe
                165                 170                 175

Tyr Leu Cys Asp Ile Leu Pro Leu Leu Gln Leu Ser Cys Thr Ser Thr
            180                 185                 190

Tyr Val Asn Glu Val Val Val Leu Ile Val Val Gly Ile Asn Ile Thr
        195                 200                 205
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Val Pro Ser Phe Thr Ile Leu Ile Ser Tyr Val Phe Ile Leu Ala Asn
210 215 220

Ile Leu Asn Ile Lys Ser Thr Gln Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ser His Ile Met Ala Ile Ser Leu Phe Phe Gly Ser Gly Ala
245 250 255

Phe Met Tyr Leu Asn His Ser Gly Ser Met Asn Gln Gly Lys Ile Ser
260 265 270

Ser Val Phe Tyr Thr Asn Val Val Pro Met Phe Asn Pro Leu Ile Tyr
275 280 285

Ser Leu Arg Asn Lys Asp Val Lys Ile Ala Leu Lys Lys Val Met Met
290 295 300

Arg Val His Ser Arg Phe Ile Ser
305 310

<210> 99
<211> 942
<212> DNA
<213> Homo sapiens

<400> 99
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ggggaacctg ggactgattg ttctgattgt gttgaatcct cacctgcaca cccccatgta 180
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aatgttggtg ggttttgtga agcagaacat catctctcat gcagagtgta tgactcagct 300
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ccacttgatg atggtgggag tgtatgtgat ggggcttgtg ggtgccatgg cacatactgg 480
tagcatgcta agtctgacct tctgtgatgg caacattatc aatcactaca tgtgtgacat 540
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cctttctaac atcctcagca ttcaatctgc agagggtagg tcgaaagcct tcagtacgtg 720
tggctcccat gtgattgctg tttctctttt ctttggagct tcagcattca tgtaccttaa 780
gccttctagt gcatctgtgg atgatgataa aatatctacc atattttata ccattgtggg 840
cccaatgttg aatcctttca tttacagttt aaggaataag gatgtccaca ttgcactgag 900
aaaaactttg aagaaaagta tgtttatcta agaagaattt gt 942

<210> 100

<211> 309
<212> PRT
<213> Homo sapiens

<400> 100

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Met Ala Phe Ser Asn Asp Ser Ser Val Lys Glu Phe Ile Leu Leu Gly
 1               5                  10                  15

Leu Thr Gln Gln Pro Glu Leu Gln Met Pro Leu Phe Phe Leu Phe Leu
            20                  25                  30

Gly Ile Tyr Val Val Ser Met Val Gly Asn Leu Gly Leu Ile Val Leu
        35                  40                  45

Ile Val Leu Asn Pro His Leu His Thr Pro Met Tyr Tyr Phe Leu Phe
    50                  55                  60

Asn Leu Ser Phe Ile Asp Leu Cys Tyr Ser Ser Val Ile Thr Pro Arg
65                  70                  75                  80

Met Leu Val Gly Phe Val Lys Gln Asn Ile Ile Ser His Ala Glu Cys
                85                  90                  95

Met Thr Gln Leu Phe Phe Phe Cys Phe Phe Val Ile Asp Glu Cys Tyr
            100                 105                 110

Ile Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys Lys Pro
        115                 120                 125

Leu Leu Tyr Gln Val Thr Met Ser His Gln Val Cys His Leu Met Met
    130                 135                 140

Val Gly Val Tyr Val Met Gly Leu Val Gly Ala Met Ala His Thr Gly
145                 150                 155                 160

Ser Met Leu Ser Leu Thr Phe Cys Asp Gly Asn Ile Ile Asn His Tyr
                165                 170                 175

Met Cys Asp Ile Pro Pro Leu Gln Lys Leu Ser Cys Thr Ser Thr Ser
            180                 185                 190

Ile Asn Glu Leu Val Val Phe Ile Val Val Gly Val Asn Val Ile Ile
        195                 200                 205

Pro Ser Leu Thr Val Phe Ile Ser Tyr Thr Leu Ile Leu Ser Asn Ile
    210                 215                 220

Leu Ser Ile Gln Ser Ala Glu Gly Arg Ser Lys Ala Phe Ser Thr Cys
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225 230 235 240

Gly Ser His Val Ile Ala Val Ser Leu Phe Phe Gly Ala Ser Ala Phe
245 250 255

Met Tyr Leu Lys Pro Ser Ser Ala Ser Val Asp Asp Asp Lys Ile Ser
260 265 270

Thr Ile Phe Tyr Thr Ile Val Gly Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Lys Asp Val His Ile Ala Leu Arg Lys Thr Leu Lys
290 295 300

Lys Ser Met Phe Ile
305

<210> 101
<211> 956
<212> DNA
<213> Homo sapiens

<400> 101
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taggactgtc caacaaccct caggttcagg cactgctctt tgttctgttc ctggtgattt 120
acctcttgac tctactgggg aacctgctga tggtgctggt gatcagtact gattcccacc 180
tctgcacccc tatgtacttc ttcctgagac aactctcctt cctggatgct ttctattcct 240
caattattgt gcctaaactg ctagagaacc ttctttctaa gggggagaca atatccttcc 300
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gcatcgtctc cattctcact accatgtcag tcctgggcct tggcaccctt gtccttttgc 660
tgggttccta cagctgtatc atcatgacag ccctgaggat caactctgct acaggtcgga 720
gcaagatctt ttccacctgc tcttcccatt tccttgtggt caccatcttt tatacttcag 780
gagttctcag gtatatgatt ccagcatctg gctcagccct agaacaagtg ctctccgtgc 840
agtacagtgt gataaccccc ctgctgaacc ccctcatcta cagtctgaag agccaggagg 900
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<210> 102
<211> 311
<212> PRT
<213> Homo sapiens

<400> 102

Met Glu Val Ser Asn Met Thr Thr Val Thr Val Phe Ile Leu Leu Gly
1 5 10 15

Leu Ser Asn Asn Pro Gln Val Gln Ala Leu Leu Phe Val Leu Phe Leu
20 25 30

Val Ile Tyr Leu Leu Thr Leu Leu Gly Asn Leu Leu Met Val Leu Val
35 40 45

Ile Ser Thr Asp Ser His Leu Cys Thr Pro Met Tyr Phe Phe Leu Arg
50 55 60

Gln Leu Ser Phe Leu Asp Ala Phe Tyr Ser Ser Ile Ile Val Pro Lys
65 70 75 80

Leu Leu Glu Asn Leu Leu Ser Lys Gly Glu Thr Ile Ser Phe Leu Glu
85 90 95

Cys Phe Thr Gln Ile Ser Leu Val Ile Phe Ser Gly Ala Thr Glu Ala
100 105 110

Cys Leu Leu Ser Val Met Ala Tyr Asp Arg Phe Gln Ala Met Cys His
115 120 125

Pro Leu Leu Tyr Val Val Ile Ile Asn Arg Arg Val Cys Ala Gly Leu
130 135 140

Val Gly Ala Ser Trp Ala Ile Gly Met Gly Thr Gly Leu Ile Asn Thr
145 150 155 160

Leu Leu Leu Ala Gln Gln His Phe Cys Gly Pro Asn Val Ile His Ser
165 170 175

Phe Ala Cys Glu Leu Pro Pro Val Leu Leu Leu Thr Cys Ser Asp Pro
180 185 190

Cys Ala Ser Ile Val Ser Ile Leu Thr Thr Met Ser Val Leu Gly Leu
195 200 205

Gly Thr Leu Val Leu Leu Leu Gly Ser Tyr Ser Cys Ile Ile Met Thr
210 215 220

Ala Leu Arg Ile Asn Ser Ala Thr Gly Arg Ser Lys Ile Phe Ser Thr
225 230 235 240

Cys Ser Ser His Phe Leu Val Val Thr Ile Phe Tyr Thr Ser Gly Val
245 250 255

Leu Arg Tyr Met Ile Pro Ala Ser Gly Ser Ala Leu Glu Gln Val Leu
260 265 270

Ser Val Gln Tyr Ser Val Ile Thr Pro Leu Leu Asn Pro Leu Ile Tyr
275 280 285

Ser Leu Lys Ser Gln Glu Val Lys Val Ala Leu Arg Arg Met Leu Ala
290 295 300

Arg Lys Ser Arg Leu Pro Leu
305 310